

NOVEMBER 1967

Industrial Development

and manufacturers record

THE NATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION



Youthful President Herman Fialkov of General Transistor Corporation reports on page 12 how his rapidly expanding organization has accomplished a remarkable growth record, particularly during the past two years.

AREA FEATURES

The State of Texas
page 17
St. Lawrence Valley—A
page 41

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INDUSTRIAL DEVELOPMENT and manufacturers record

BPA

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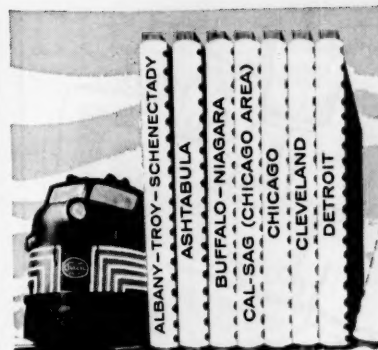
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Facts for site seekers

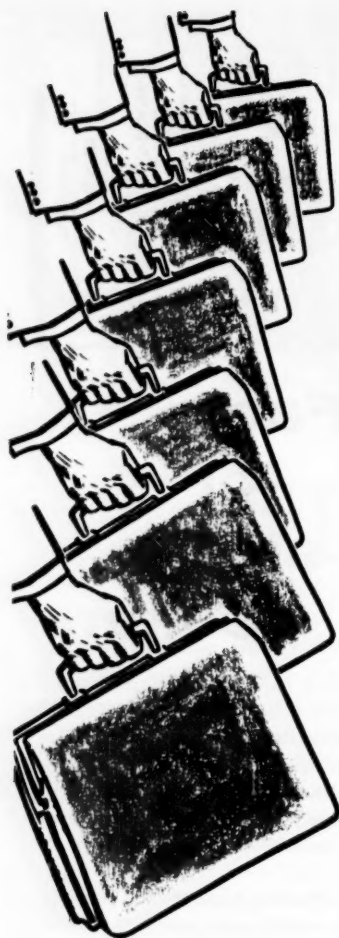
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True, we do enjoy our work. Deep down inside, we know that, and we wouldn't want to trade jobs with anyone. But that doesn't mean we *always* enjoy travel and that *every* trip is a thrill from start to finish.

In fact, we get sick of looking at the inside of hotel rooms, swank or otherwise. And there are days we get filled up to here with watching the earth slide by underneath. We get tired of watching the time, making appointments, arranging schedules, hurrying, hurrying, and hurrying.

Those who envy us for our travels never see the dark side, the five-hour weather delay in some strange airport, the interminable rides to town via cab and airport limousine. They forget, too, that it's no fun to spend a couple of weeks out of each month away from the family.

Hence, after covering 49 states (all except Alaska) in the past few months, your editor had gotten to feeling like a first-class martyr. We began muttering to ourselves about the sacrifice we make to keep our loyal readers posted on what's doing.

Then we met Andy Leros. We got acquainted at about 10,000 feet some 2,000 miles southwest of California. Any ideas we had that we travel a lot were quickly laid to rest. Andy was shepherding a group of Chevrolet execs and wives back from Tahiti.

It seems Andy has his own company, based in San Francisco, which arranges very special vacation jaunts to exotic spots for elite business groups. You'll be gratified to know that Andy, like all of us, has his problems. He's been carrying groups to Tahiti for so long we gather he is fed up with glamorous tropic isles. With him, a hop to Bora Bora or Papeete is about as exciting as a trip to Staten Island for a Bronxite.

Somewhere down the islands Andy had lost his shoes. Then, one of his aides had reported sick and he was going to have to pinch-hit the next morning on a jaunt to Nassau. Ho-hum, his life today is just one dreary trip after another to lush resorts in the West Indies and South Seas. So, stop grumbling about that trip you've gotta make to Peoria or Birmingham. Think of poor Andy!

* * *

The city will dominate every section of the country by the year 2,000 according to an extensive population study, "Metropolitanization of the United States," just released by the Urban Land Institute of Washington, an independent research organization specializing in urban planning and development. The study is the work of Dr. Jerome P. Pickard, economic geographer and population analyst.

Dr. Pickard's projections show that by the year 2,000, 85 per cent of the country's population, some 320 million, will live within urban areas. The expansion of the nation's 300 metropolitan areas is estimated to demand a land area of 55,000 square miles, an area equal to the state of Illinois. (A metropolitan area is an urban area including one or more adjacent cities with an area population of 100,000 or more).

Ten super-metropolitan areas will contain one-third of the nation's population in forty years. Dr. Pickard sees these sectors as having the same general complexity and geographic extent as today's New York City metropolitan area.

The new super-areas in the year 2,000 will include a "Chesapeake and Potomac City" of 9.5 million including Baltimore and Washington, D. C.; a "Delaware Valley City" of 8.5 million centering on Philadelphia; a "South East Florida City" of 6.5 million with Miami as its hub; a "North East City" of 6.5 million around Boston; and a "Cuyahoga Valley City" of 5 million including Cleveland.

Among the older super-metropolitan areas, New York is expected to continue to be the nation's greatest population center. Its population in the year 2,000 is projected at 23 million; Los Angeles' 20 million; Chicago's 11 million; Detroit's 9.5 million; and San Francisco's 7.5 million.

Another forty per cent of the American people will live in 285 smaller metropolitan areas of between 100,000 and 5 million population.

* * *

A milestone in the history of New England's successful credit corporations was the recent declaration of the first stockholder dividend of \$1.00 per share by the Connecticut Development Credit Corporation. Shown signing the dividend checks are President Henry G. Hutchinson (right) and Vice President Clarence G. Ivey (left), while Treasurer Joseph R. Proctor looks on.



Like the other credit corporations in New England, Connecticut's CDCC is a privately financed organization specializing in term loans to growing small and medium sized business firms who are unable to obtain all of their financial requirements from capital markets or regular credit sources. By supplementing normal credit and capital, CDCC is able to give a financial boost to expanding companies, and in its five year history, CDCC has advanced over \$2,500,000 to 48 Connecticut businesses.

* * *

Second only to a man biting a dog is a businessman who is not pessimistic about the tax situation. That's why the talk made recently before the New York Society of Security Analysts by O. Roy Chalk is so significant. Chalk, who is President of the Transportation Corporation of America, Trans Caribbean Airways, and D. C. transit, had this to say:

"I honestly do not believe that our high taxes have seriously curtailed investment incentives. We have had the highest levels of investment in our history in the last decade despite high taxes. As long as there are rewards that are reasonable on an after-tax basis, I think the American investor and the American businessman is not going to stop investing and stop expanding and stop developing new enterprises and new activities. Even with high taxes, the rewards for initiative and for new ideas and taking risks are still very attractive. My own experience since the end of World War II convinces me that those who shed crocodile tears over the elimination of economic frontiers in the United States have no basis for their gloom and pessimism. We live in a country that is still full of opportunity and bright prospects."

—H. M. C.

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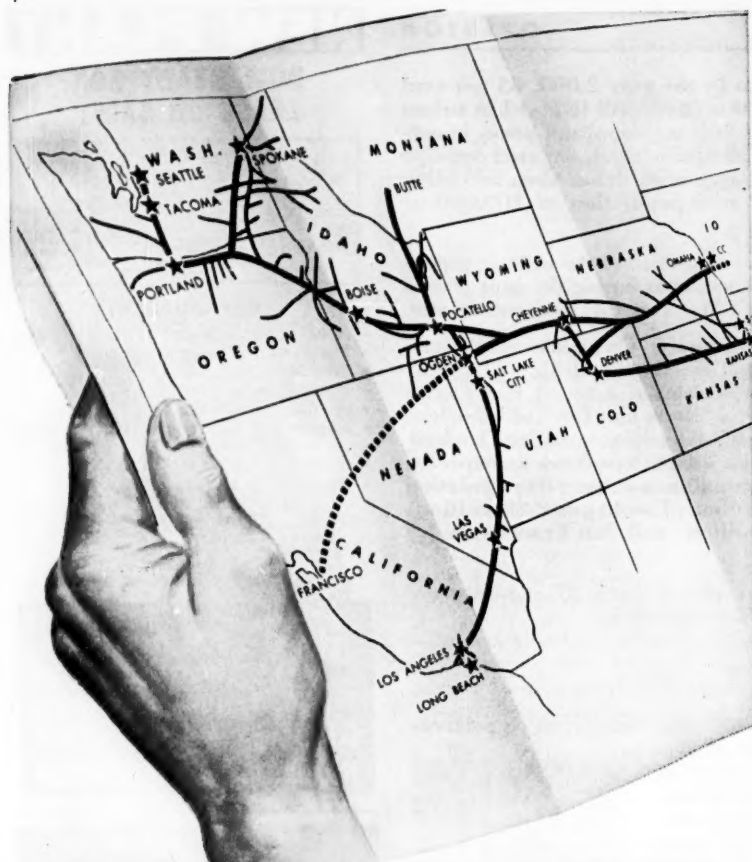
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SIRS: While we all appreciate the important part coal has played in our industrial past and the part it will play in the future, Mr. Pickett "generalizes" too liberally in his article "The Case for Coal" which appeared in the August issue.

Mr. Pickett makes a point of the cost of coal at the mines vs. the cost of gas at the well-head. More significant and of more importance is the cost delivered to the consumer. The Consumers Price Index—with 1935-39 equal to 100—reveals that the consumer price index for natural gas at the end of 1958 was approximately 118 per cent, while anthracite coal was approximately 250 per cent and bituminous coal approximately 238 per cent.

The graph shown in his article titled "Comparative Off-Tract Fuel Costs—Coal vs. Natural Gas"—distorts facts by ignoring the availability of gas on a large volume gas rate, making gas more economical in instances where the total costs per thousand pounds of steam are considered. This is particularly true for the area at the foot of Green Bay in Wisconsin. These total costs include boiler room labor, combustion efficiencies, cost of precipitators, cost of land for storage and actual carrying charges on stored fuel, ash handling equipment, and other factors, including flexibility, which must be considered in comparing costs. This is even conceded by Mr. Pickett when he says, "Comparative costs of fuels can be determined only by some common denominator, such as cost per unit of developed energy."

Mr. Pickett also makes a strong point on engineering services of the coal industry. What gas distributing company or progressive pipeline doesn't employ at least one registered professional engineer competent to make an economic, engineered study on the economies of fuels? This number would greatly overshadow the 19 field engineers.

All in all, Mr. Pickett's article was interesting and stimulating, but incomplete in detail and therefore misleading. All of the "professional" developers should be aware of these circumstances which again proves the point that a practicing code of ethics should be developed and adhered to.

ROBERT B. FICK
Ind. Dev. Coordinator
Wisconsin Public Service Corp.
Oshkosh, Wisconsin

► We are always happy to provide space for another viewpoint. Mr. Pickett has been requested to make a reply.

SIRS: We would appreciate your sending us a copy of each of the free area survey reprints listed on page 10 of your August, 1959 issue of **INDUSTRIAL DEVELOPMENT**.

Will you also include copies of your articles "Company Organization for Ex-

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LETTERS

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HARVEY SMITH, Manager
Market Research
Vulcan Materials Company
Birmingham, Alabama

SIRS: As you probably already know, we have been appointed the advertising agency for the Industrial Development division of Missouri Resources and Development.

As such we have already found your magazine *INDUSTRIAL DEVELOPMENT* and *MANUFACTURERS RECORD* an invaluable source of information, and would like to receive it regularly for our library . . .

MARGARET PAUTLER,
Librarian
Krupnick & Associates, Inc.
Jefferson, Missouri

SIRS: Your pet peeve in the August issue of *INDUSTRIAL DEVELOPMENT* that many developers overlook the importance of the company airplane in site planning was most interesting.

Along that line I would like to report that an airport for executive planes is now being constructed in the North Industrial District near Abilene, Texas. We have found interest high in this project among prospective site seekers.

HAL SAYLES
The Sayles Company
Abilene, Texas

SIRS: We are most pleased with the Oklahoma section in the September issue of *INDUSTRIAL DEVELOPMENT*, and particularly pleased with the "Muskogee segment" of the story. The whole thing is an excellent job, in our opinion, one which should mean much both to Oklahoma and to Muskogee.

. . . You might be interested to know that on the very afternoon of the day our copy of the magazine arrived, I received a long-distance call for additional specific information about Muskogee.

Will you please pass along to your circulation department our order for 12 copies of the September issue . . .

PAUL A. BRUNER, Manager
Muskogee Chamber of Commerce, Inc.
Muskogee, Oklahoma

SIRS: There was an interesting reference to your publication "Ideal Location, U.S.A." in the August 28 *Charlotte News*. Somehow we missed getting a copy of this, and would be most appreciative if one is available to us.

WILLIAM L. BEERMAN, JR.,
Director
Public Relations—South
Burlington Industries, Inc.
Greensboro, North Carolina

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November, 1959



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GEOGRAPHY OF

By DR. JOSEPH A. RUSSELL,
Head Of The Department Of Geography
University Of Illinois



IT is axiomatic that the cost of product manufacturing and product distribution is a powerful influence in determining the present location of manufacturing. It is equally apparent that the costs of manufacture and distribution have measurable differences from place to place.

Leonard C. Yaseen, in his recent book, "Plant Location" says, "In many industries a differential of as much as ten per cent of total manufacturing and distribution costs can be effected simply by virtue of geography." I bless Mr. Yaseen for his statement, however, I disagree with him, but only in his figure—it is too low.

The modern geographer is concerned with differences and similarities that occur between places in the facts of specific problems, and in the meaning or significance of these differences or similarities between places. One of the specific problems that has interested geographers is the distribution of manufacturing; this has led to research into causes of the differences and likenesses that are so apparent in the distribution of manufacturing in general and in particular kinds of manufacturing. It is only a short step to

INDUSTRIAL COSTS

A very important factor to be taken into consideration in your plant location planning is how geography can affect the cost of both manufacturing and distribution operations. This study explains in detail some of the approaches you may make determining the geography of industrial costs.

project the facts learned in a geographic study of the causes for the existing patterns of industry into a geographic method for assisting in the process of locating new industries or relocating established ones.

I would like to introduce you to this geographic method. This requires that I review very briefly the locational process.

The locational process: once it has been decided to seek a new site for all or a part of an industrial organization, management is immediately faced with three locational decisions: (1) In which of the general regions of the country will it locate; (2) In what community of the selected general region will it locate; (3) On what exact site within the chosen community will it tell the contractor to start work on the new building?

These three choices — region, community and site — over-reduce the problem, perhaps, but with some variations, each must be answered before operations start at any new location.

The solution to the first of these questions often is internal to the industry, solved by internal means in light of company policies and objectives.

Yet even the regional choice should be made with full appreciation of the comparative cost merits and cost demerits inherent in the regional components of materials, transportation, market potentials, labor supply and the like. The solutions to the last two questions (community and site) normally are derived by the process of matching the production and distribution needs and the wishes and desires of management personnel against combinations of conditions that exist together in the various places (or communities) of the selected general region. As we will see, it is my contention that this matching process can be safely completed only after the conditions bearing on location are studied on a basis which will permit simultaneous comparison of all places, as on a map. This element, simultaneous comparability is the heart of the geographic method.

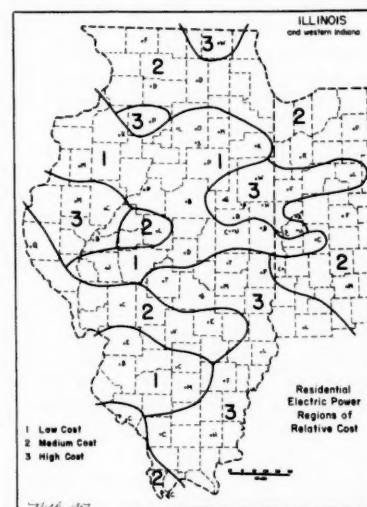
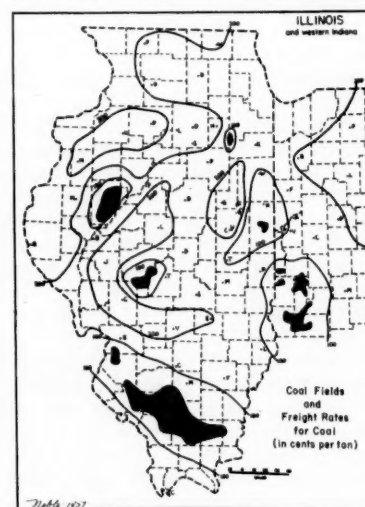
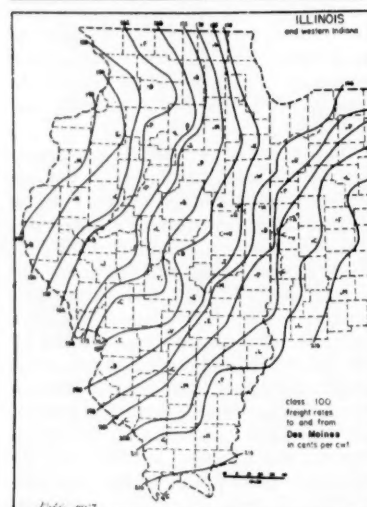
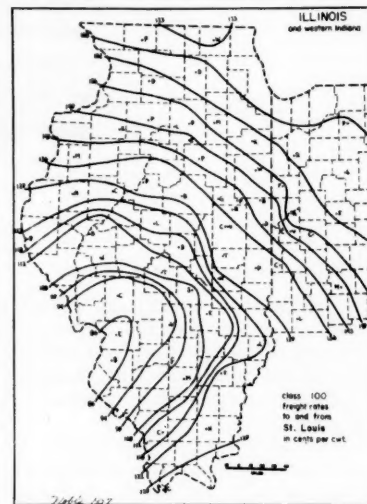
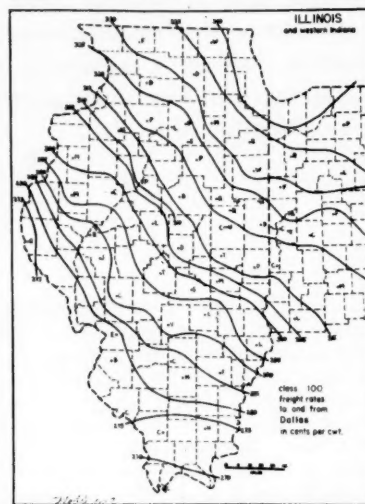
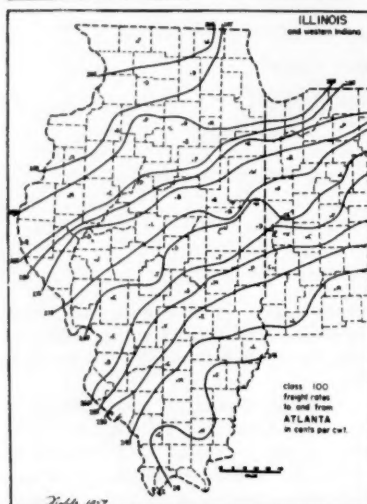
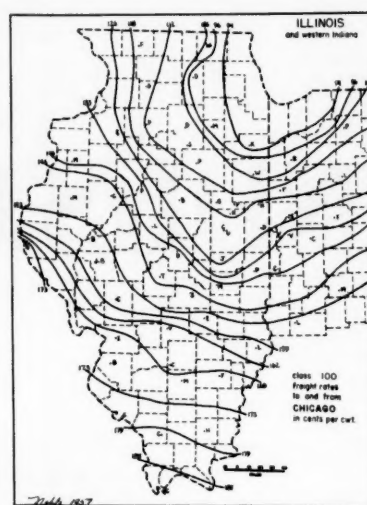
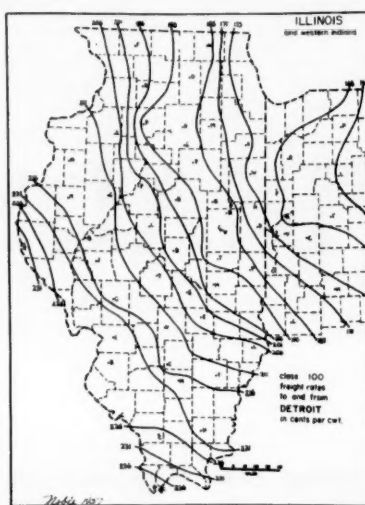
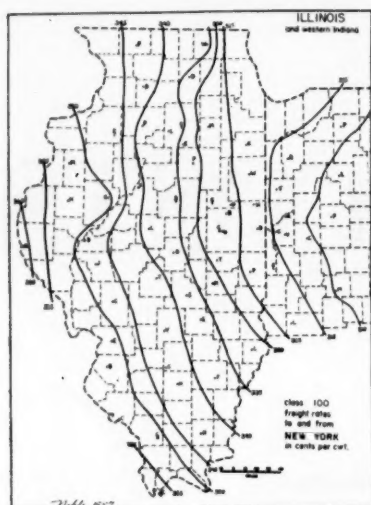
As the locational process—the matching of industrial needs with the abilities of various communities and sites to satisfy those needs—unfolds, it becomes evident that, in theory at least, no two industries have exactly the same locational requirements and no two

communities have exactly the same advantages to attract some industries and the same liabilities to keep others out.

Both the community and the industry are unique and it is the ultimate objective of the locational study-process to match the unique requirements of specific industries to the uniquely qualified community and site. Although it may be treason to say so, and despite the preponderance of the promotional literature, no single place can be the best possible spot for practically any industry.

This matching process largely is concerned with industrial costs. I will get some argument there, I know. I do not depreciate the importance of other factors, but it is very certain that the core data in industrial site selection are industrial costs, and that, when presented in map form these costs have patterns which display regional and local differences and similarities of measurably greater or lesser magnitude than can be determined and used to predict the probable success of industrial plants, which, once located, become relatively fixed points in the cost geography of their particular operation.

INDUSTRIAL COSTS



INDUSTRIAL COSTS

I used the word "predict" just above; it is essential that we keep before us the fact that the end of the locational study is a prediction — a prediction that the man is going to be successful at a particular spot.

The geography of industrial cost: the patterns of difference and likeness in industrial costs which are evident when mapped I have called the geography of industrial costs. You are familiar with maps, which, by using lines called contours which connect points of equal elevation, represent the unevenness of the earth's surface. It is readily apparent from contour maps that there are mountains, hills, plains and valleys and that towns and cities are located on mountains, in valleys, or on plains.

Just as there are mountains, hills, plains and valleys when we study the geography of land forms, and just as different cities are located on mountains or on plains, there are areas of high or low cost from the standpoint of individual industries, and different cities are located in these high or low cost areas.

The chief difference between the geography of land forms and the geography of industrial cost is that the cost mountains and plains do not stand still, either in space or in human time. A cost mountain for one industry may be a cost valley for another, and it is the responsibility of the locational survey to bring a city to the attention of those industries for which that city is a cost valley.

Just as long-time geological processes wear down real mountains and fill in real plains or basins, changes in technology, material sources, markets, transportation media, or political conditions change relatively low-cost areas to relatively high-cost areas, or the reverse. Compared to the thousands of years involved in most geological processes, however, the changes in the geography of cost sometimes occur with catastrophic suddenness.

The accompanying maps illustrate the geography of costs with lines connecting plains of equal cost. It is apparent that various communities are located in areas of high, low, or equal cost in relation to other places.

Other kinds of industrial costs, such as power charges, can also be converted to map form. We have two major regions appearing on the accompanying electric cost map of Illinois. This region, which is a little above the state's midpoint, in the spread of power costs,

and the larger separated one to the north, are the same regions cost-wise. It costs the same per kilowatt hour for power in these two areas; it costs somewhat less in a large homogeneous region here.

There are, however, in addition to the major regions which appear for many cost items, spots which are peculiarly high or peculiarly low in comparison with the region in which they exist. So, simultaneous comparison of all places reveals cost spots, as well as major regions of industrial cost, and it may be that these spots are very important to the industry seeking a location.

In some cases, there may be no rhyme or reason to the geography of cost, but there still is a measurable difference in the costs places, and when you compare them simultaneously, you can pick out these points of interest to the locator. Once an industry has stated its major cost requirements and the geography of these costs has been determined and mapped, the matching of costs and requirements to determine places where the industrial process can take place with reasonable competitive advantage is greatly facilitated.

Maps can be prepared in advance by selecting standard units: tons, therms, kilowatt hours, gallons, tax rate per thousand dollars, hourly wages, and so on. Once such maps are prepared for a number of cost items which are common to most industries, they provide a remarkable quick means of evaluating all communities within a specific area.

Principles underlying the geography of industrial cost: as the concept of the geography of cost is applied to the process of locating an industry, there are seven major ideas upon which the study is based.

1. In a competitive economic system, cost is fundamental in any locational decision, and the effect of most locative factors can be expressed in cost terms. (The ultimate objective in choosing a location for industry, of course, is to achieve maximum profit, and in competitive situations, profit is largely controlled by cost.)

2. The costs that are incurred by industry are dependent upon the interaction at a single place of a very large number of widely differing characteristics of both the area and the business. These characteristics are usually grouped into a number of "factor" categories, among which are:

(a) Economic (capital, wages, markets, semi-finished materials, and so forth.)

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- (b) Natural (physiography, climate, water supply, resources, and the like.)
- (c) Human (labor requirements of the industry, labor supply available, living conditions, amenities of life, prestige factor, which can be measured in costs, by the way.)
- (d) Political (tax rates, tax structure, political control, resource laws, zoning laws, political objectives, and so forth.)
- (e) Transportation (kinds, networks, rates, schedules.)
- (f) Engineering (building size, design, construction problems, and so forth.)

These are the factors, among others, normally used in locational studies.

3. None of the above "factors" operate independently, but in relation to all the others. Yet most of the literature on industrial location, and the checklists of items to consider use the "factor" organization. I suggest that for analytical study, the factors must be reclassified and mapped into a functional cost classification consisting of three broad cost categories that together make up the total cost structure of any industry. These functional categories are:

- (a) The costs of accumulating all the required materials, services, and so forth, at a single place on the face of the earth, that place, of course, being the location or proposed location or possible location of the plant. Included here are: (1) cost of production of materials and services at their points of origin; (we all know that the costs of production of various materials and service that may be required by industry are different at different places, or may be different); (2) all costs of transportation

of these materials and services from their points of origin to present or projected factory locations, and here again, costs will be different.

- (b) The cost of converting the materials and services into products at that single place, and all other costs incident to operations at that place. Included here are: cost of rent (including construction of the plant), cost of money, labor, taxes, insurance, depreciation, local services, waste disposal, smoke abatement, water police and fire protection, and so forth.

(c) The cost of distributing the products from the manufacturing place to the various market places. These costs reflect market accessibility and transportation costs, market variability, differences in packaging required for different markets, and so on.

4. These functional cost categories, when applied to the total cost structure of specific industries, include a very large number of individual costs. Many of these individual costs will be quite different if the industry is located at some one place rather than at some other place. Others of the individual costs will be similar at various places, yet even if only a few of the individual costs exhibit important differences from place to place, the total cost of accumulation, processing, and distribution for industries is likely to differ from place to place.

5. Management can overcome some of the geographic cost differences by compensating operating economies, but these only partly equalize total locational cost inequities.

6. Careful consideration must be given to trends in all of the factors that create industrial costs. This is

true because the entire locational process is a planning process, and planning by its very nature is directed toward the future. The locational study actually predicts future patterns of industrial costs because it must tell the manufacturer that the location of a particular place will be advantageous in the cost geography of his industry during the entire time the installation is being planned, built and amortized — x number of years hence.

7. The industrial location study is in large measure a regional study. It is particularly appropriate that I present this phase of the geography of industrial costs before a regional organization like the Great Lakes States Industrial Development Council because, as I am sure you already recognize, the geographic method used is a regional method. Industries do not manufacture products from materials that are all obtainable at any one place, and few, if any, market all of their product at the place of manufacture. You have exceptions to both of those, but the exceptions would only prove the rule. Every industry, therefore, reflects at least regional material availability and regional market accessibility.

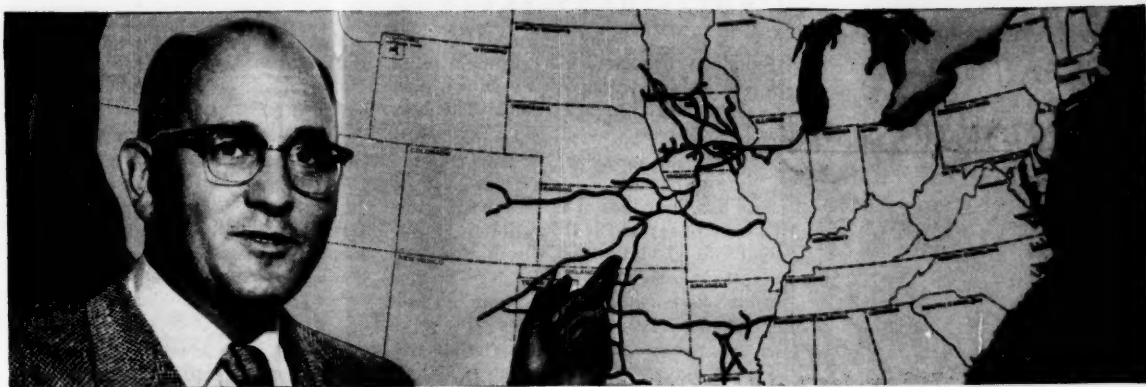
Even at the community level of locational study, it must be recognized that communities do not exist in a vacuum, but rather within a regional pattern of material and market costs over which individual communities can exercise little control. Some communities have local advantages because existing industries may supply components or by-products for other industries, or in local materials, such as coal, oil, gas, agricultural or forest products and the like. Other communities may have access to water for bulk shipments, north-south rails and east-west rails, air freight terminals, or pipe lines, but no single community has all the things that any industry will require. The regional cost patterns of material accumulation and product distribution within which any community in a given area exists are quite inflexible at any particular period in technology.

The processing costs are the ones over which individual communities can exercise some degree of control — here, within limits again imposed by regional considerations, they can reduce the effects of regional cost hills and increase the depth of regional cost valleys. Or they can, through neglect or lack of recognition of the facts, permit exaggeration of regional disadvantages.

ABOUT THE AUTHOR

Head of the Department of Geography at the University of Illinois, Dr. Joseph A. Russell in his professional work is concerned with industrial location and marketing geography. In the latter field he has served as geographic consultant to the director of market research of the Ford Motor Company. He is co-author of a textbook on economic geography and has written many articles on industrial problems. Dr. Russell received his Ph.D. from the University of Michigan and has taught at Harvard, Michigan and Illinois Universities.





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AT GENERAL TRANSISTOR:

The president of a relatively small but rapidly expanding electronics firm reports here the planning and programming that has contributed to its mushrooming growth . . .

By Herman Fialkov

DURING the past two years General Transistor Corporation has grown at a remarkable rate. This has resulted from several carefully planned moves including a broadening of the product lines along with substantial expansions of production facilities.

Currently General Transistor has one plant at Jamaica, New York, two plants in Richmond Hill, New York, and one

and to get them into production.

These efforts have resulted in successful entries into the diode, drift transistor, and silicon transistor markets.

One of the more important of these developments affecting the future outlook for General Transistor Corp. has been our shift from the transistor industry to the broader field of semicon-

the transistor field.

Since we now have an objective in a much larger industry, and one in which we do not have the same kind of foothold we had in transistors, we have tentatively set the 8 per cent goal for 1970. We have to achieve a one-half per cent increase each year as we were at almost two and one-half per cent of the total semiconductor market last year. Projecting that into the future, where we expect about a billion and a half dollars in industry sales in 1970, that means General Transistor is looking for about 120 million dollars in sales of semiconductors by 1970.

Diodes are used, to a great extent, to perform much of the arithmetic done by a computer. Since the computer field currently takes about 80 per cent of our production it is quite logical that we would seek to develop diodes that may be used by that industry.

In 1957, we completed our research and development work on our germanium gold-bonded computer diode and last year we went into production on this semiconductor device. While diodes account for less than 10 per cent of our current volume of sales, we are making important progress. The germanium computer diode is not a new or unique product, but it marked the expansion of our line beyond the pure transistor class of semiconductor products and gave us an entry into a market which should utilize about 90 million units next year.

During 1959, as a result of intense research efforts aimed at developing a unique diode which could possibly obsolete presently used computer diodes, we completed our development work on a new type diode called a "mesa" diode.



**General
Transistor
Corporation**
● PLANT LOCATIONS

plant at Woonsocket, Rhode Island.

Plants operated by our subsidiaries are: Semimetals, Inc., Richmond Hill; General Transistor Western Corporation, Los Angeles, and Systematics, Inc., Redondo Beach, California.

A part of our program has been broadening of our semiconductor lines and intensification of efforts to develop new or different semiconductor devices

ductors. This has been a gradual transition but one which we feel has now been successfully accomplished. Essentially, what we have done is to add a line of diodes to our transistor products. At the same time, we have shifted our goal from 8 per cent of the transistor market to 8 per cent of the semiconductor industry, which is probably two and one-half times greater than

GENERAL TRANSISTOR

It is capable of operating at extremely high frequencies with superior characteristics. A major marketing program is being planned.

About a year or so ago we also went into production on our very high frequency drift transistor, which is for high speed computers as well as high frequency communications equipment. This product has proved very successful with demands straining our production capabilities.

Production was started early this year on a silicon fused alloy junction transistor for the military market. This transistor is of use in missiles and aircraft because of high temperature capabilities. While the demand for this type of transistor has not yet met expectations, a recent report published by the Electronics Production Resources Agency indicated that military requirements will total several hundred thousand units over the next two and one-half years.

General Transistor's products are now being widely used in a number of defense projects and space program developments. Sales to the military and prime government contractors represented 23 per cent of sales for 1958 and are now running at approximately 48 per cent of semiconductor sales. A continuing emphasis on this program by the company has resulted in military type approvals on many of our types.

This expansion has played a part in our achieving a major goal—the diversification we have accomplished in our sales. The Univac Division of the Sperry Rand Corporation has accounted for a substantial portion of our sales since 1955. In 1957, sales to Sperry Rand were 57 per cent of our total; in the first half of 1958, they were 48 per cent, and in the last half they were 34 per cent. During the first six months of 1959, sales to Sperry Rand, which were less than 15 per cent of total sales, continued as an important, but not dominant portion of our total volume. We, of course, hope to continue as an important supplier of computer semiconductors to Sperry Rand, but we are pleased that in recent years we have been able to add other customers so as to pass the vulnerability of depending on any one customer.

In the past few years we have increased our efforts and expenditures for research and development. Our budget for 1959 is \$600,000 or about three times last year's allotment. The

areas of device development cover the field from low frequency audio type devices to 4,000 megacycle parametric type amplifiers.

Since General Transistor has, almost from its inception, been a leading supplier of transistors to the computer industry, it follows that our research effort is naturally continuing in the direction of developing advanced devices for the computer industry, where the reliability and characteristic demands are most stringent. Our research department is currently working on a mesa transistor. This is a device employing extremely small geometries and capable of amplifying 100 megacycle signals. We hope to develop a mass producible mesa transistor by the end of this year or early in 1960.

We are currently doing some important development work in micromodules which will help reduce the size of computers used in missiles to about one tenth their present size. This involves the fabrication of the transistors and other components all together on a small ceramic wafer. The miniaturization obtained is particularly significant in that it reduces the weight of computers in satellites and missiles.

A four-layer transistor-diode, similar to a thyratron tube in its operation, has also been developed by our research engineers. The four layer device was designed as a high speed switch useful in turning on the memory core of a computer. It has also been found useful in other areas necessitating the fast switching of high currents.

Along with our silicon transistors, which were placed on the market several months ago, we are developing diffused silicon mesa transistors for use at high frequency and higher power levels along with mesa type silicon diodes. Work in the microwave field includes the building of diodes suitable for parametric amplifiers. Studies are being conducted, at present, in the building of a parametric amplifier and examining the interaction of solids with microwave fields.

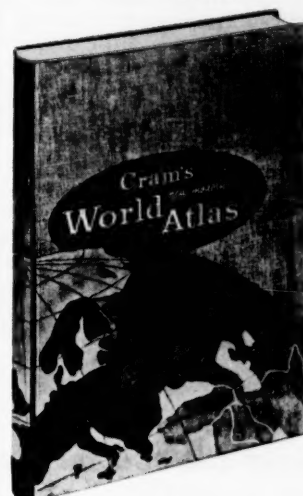
In 1958 we commenced the development of a high-reliability precision wire wound resistor for use in analog computers, and military electronic equipment. The advantages of this device were recognized by the Air Force and we were recently awarded a contract to study and improve the methods for manufacturing this item. We expect that an Air Force specification will be drawn up as a result of this contract

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which will quickly establish a large market for this resistor.

Undoubtedly, a major factor in our present and future growth is our acquisition in May of Systematics, Inc. This company, which will operate under its present management, as a wholly-owned subsidiary of General Transistor Corp., has experienced remarkable growth since 1957, when the present management assumed control. Sales have increased from \$542,000 in 1957 to \$900,000 in 1958. Sales for the fiscal year, which ended April 30, 1959, reached \$1,460 million. Systematics' sales for the current fiscal year are expected to increase approximately 60 per cent.

The company has concentrated on developing products and engineering know-how which will allow business machines to communicate reliably at low cost with one another. Their principal products are electro-mechanical devices known as Intercouplers, and they have become important accessory equipment for products built by such companies as National Cash Register, Burroughs, IBM, Commercial Controls, American Telephone & Telegraph and Olivetti.

The data processing industry is one

of the fastest growing in the United States' economy. The revenues of this industry now exceed \$2.5 billion annually. As clerical and manufacturing problems become more complex, it seems clear that the demand for this industry's products will substantially increase.

Systematics has its engineering and production facilities located near Los Angeles and is currently carrying on research and development projects so as to develop Intercouplers which may be used in connection with the Data-phone system of the telephone company and other wire systems which will enable machines to communicate with each other over telephone lines. They also plan to develop Intercouplers to be used with devices producing embossed and printed credit cards, with addressing and mailing devices, with industrial scales and other industrial logging equipment, and for automatic reproduction of braille.

In 1958, General Transistor Distributing Corp., which sells General Transistor products through electronic parts distributors, paralleled the expansion of the parent company. Moreover, this organization took a significant step forward by obtaining agreements with

Gulton Industries, Technitrol Engineering Company, Columbus Electronics and Electronic Fabricators to distribute certain of their products nationally. Other companies are being encouraged to enter into similar agreements with General Transistor Distributing Corp. which should result in further profit to this subsidiary.

Semimetals, Inc., our subsidiary which engages exclusively in the development and production of germanium and silicon single crystal ingots of high purity continues to operate profitably.

General Transistor Corp. has also benefited from the merger a few months ago of Elsin Electronics Corporation with another electronics company from which the Specialty Electronics Development Corporation evolved. Specialty's current operations are profitable and General Transistor should benefit materially from its interest in this company's operations.

During the past two years, our manufacturing facilities were substantially increased by the acquisition of a 130,000 square foot plant in Woonsocket, Rhode Island, which greatly increases our production potential as compared with that of the four plants in Jamaica, Long Island. In fact, the Woonsocket facility, which now employs 200, is large enough to handle an operation ten times that size.

Nevertheless, we are studying a possible consolidation move of our current operations in Jamaica to one large plant facility on Long Island. The new plant site should have capacity considerably in excess of the present total production capabilities of all our Jamaica plants combined. The centralization of our facilities at one plant site will also make for improved supervision and coordination, and undoubtedly result in other economies in our overall operations.

Our location in one place will not alter our current program of decentralization however, wherein each division or subsidiary operates in a completely autonomous manner. We just completed this plan about three months ago and are very pleased with the results evidenced so far. Our purpose was to fix responsibility for profits and enable each unit to handle its own buying and selling operations so that a proper balance between costs and sales could be maintained. We are continuing to give considerable attention to adding and developing top level management people without whom our growth would be impossible.

40

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A review of our growth in sales and earnings during these two years shows that by the end of 1957 our sales had doubled over the previous year and reached \$3.261 million. Our net income had also doubled to \$346,000 and our earnings per common share came to \$.56 on 613,454 shares outstanding.

By the end of last year our sales reached \$5.484 million, and our net income after taxes \$533,000. We almost doubled the results of the previous year. Our 1958 net income per share came to \$.72 on 740,262 shares outstanding.

In the first six months of 1959 our sales almost equalled our total for 1958. For the 1959 period ended June 30th, our gross sales were \$4.846 million. If we keep on at this rate, and we expect that we will, by the end of this year we should double our 1958 sales volume. Our net income after taxes for the first two quarters of 1959 was \$350,000 and our net income per share came to \$.40 on 875,346 shares. All of these figures have been adjusted to reflect our recent two for one stock split. However, only the figures for the past six months reflect the operations of Systematics. A difference in fiscal periods has made it difficult to accurately add the results of their previous years' operations to ours for comparison purposes.

Our goal in 1959 is to achieve a sales volume of between ten and twelve million dollars. In accomplishing this, we hope to earn 25 cents in the third quarter and 40 cents in the last quarter of 1959.

In 1956 we employed 167 persons. In 1957 we more than doubled that figure, and last year 537 employees were on our payroll. By the end of 1959, I believe our total employment figure may reach a little more than 1,000.

In my opinion, it takes approximately three years to get a new idea both into production and accepted on a mass basis after it has been developed

in the laboratory. And even then it may not do away completely, or even substantially, with the product it has been designed to replace. By that time other companies are producing competitive products of their own.

This means that the established companies, such as General Transistor, can successfully meet the challenge of virtually any new development or new product that comes into existence.

In steadily and substantially increasing our sales volume, in diversifying

our products, broadening our goals, eliminating our dependence on any single customer, decentralizing our operations, expanding our research and development activities, establishing better plant facilities, and working to improve management and personnel, I believe that we at General Transistor have proved, these past few years, that we are not only here to stay but we can also be counted on to secure an important niche in the future development of our chosen field of operations.



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ABOUT THE AUTHOR

Heading the young and rapidly growing firm of General Transistor Corporation is 37-year-old Herman Flalkov. Born in Brooklyn, Mr. Flalkov holds an engineering degree from New York University and also attended the School of Technology at the City College of New York. From 1949 to 1951 he was an engineer with Teletone Radio Corporation in New York City and Bayway, N. J. In the latter year he became chief engineer of Radio Receptor Corporation, Brooklyn, a position he held till being named president of General Transistor in 1954. He is a member of several trade and fraternal organizations.

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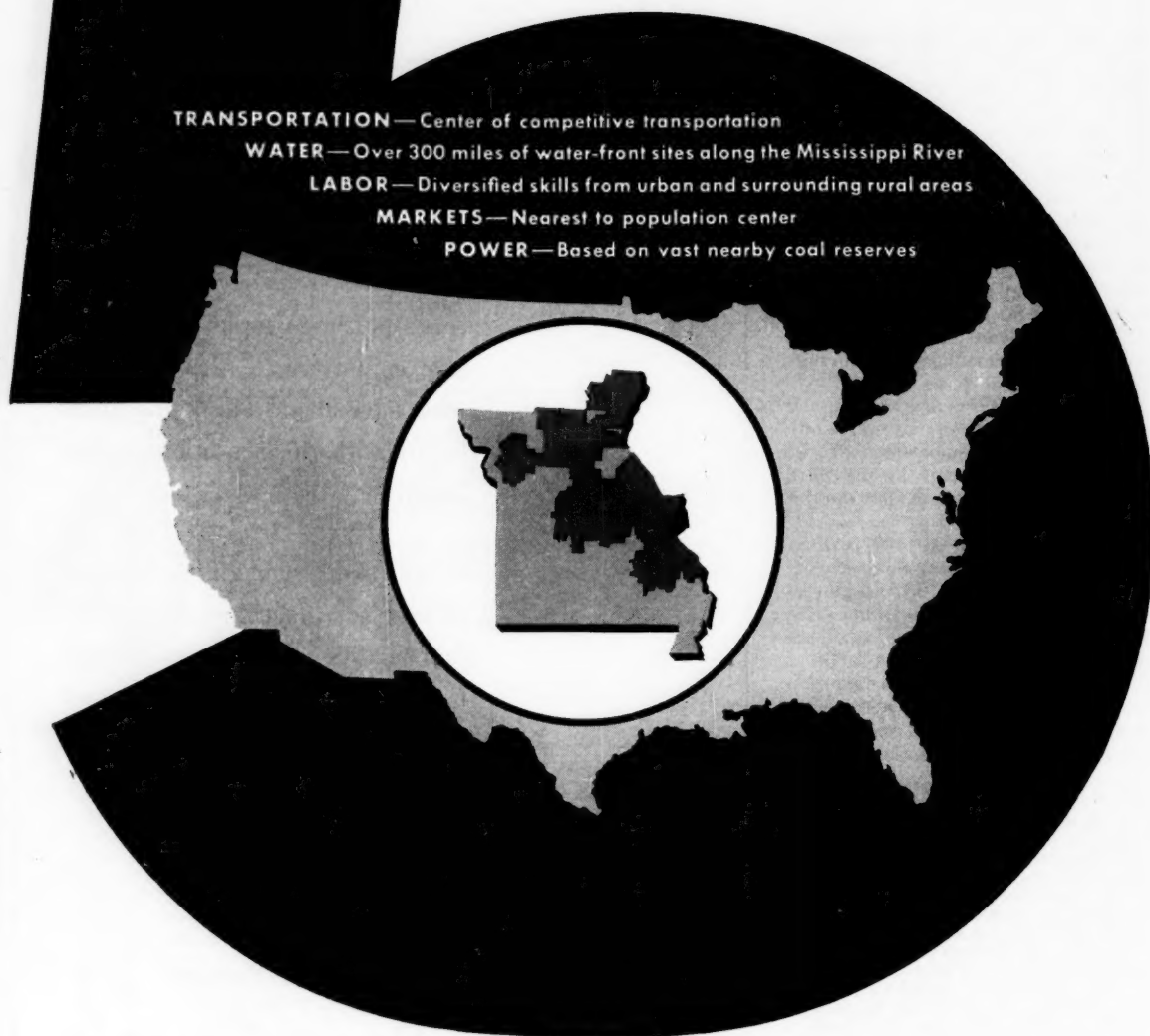
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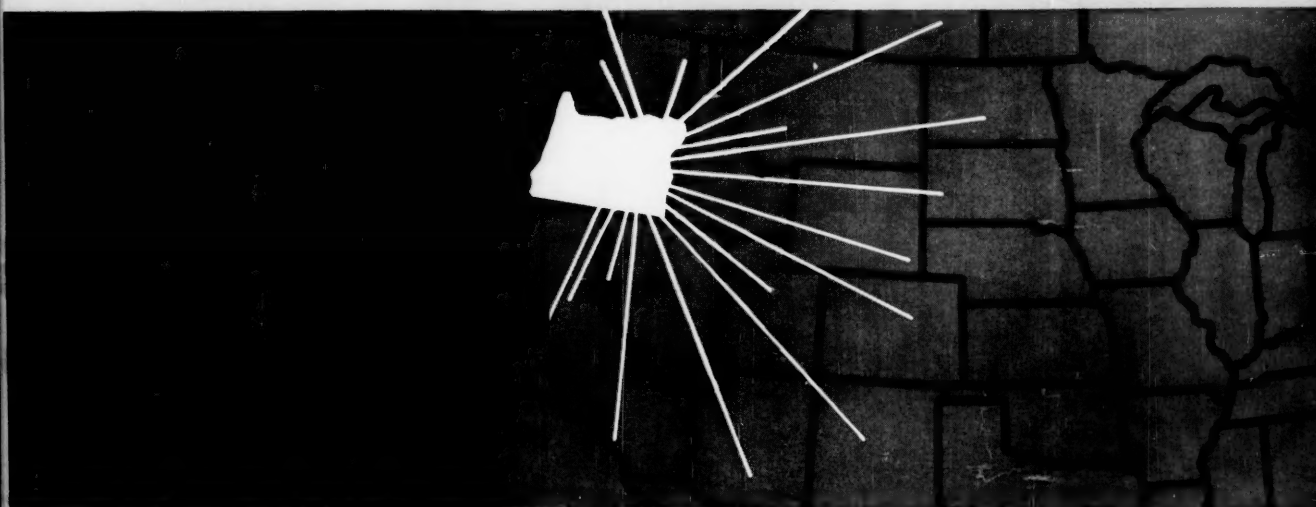
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DIVERSITY AND REFINEMENT—KEYNOTE FOR GROWTH IN

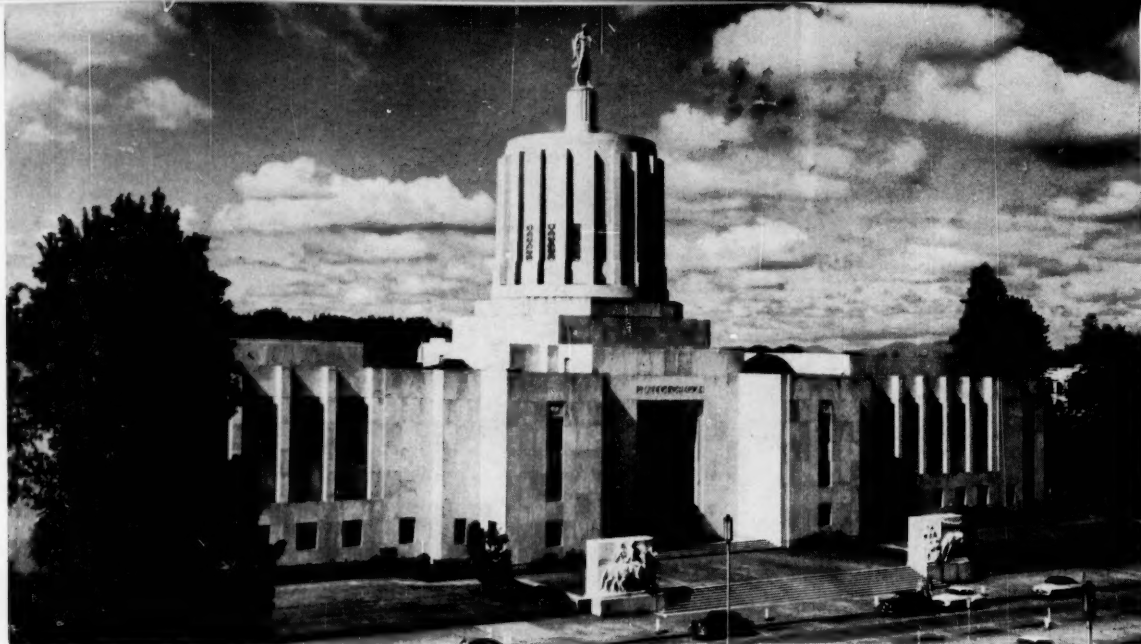
OREGON



A Pacific coast state that offers you easy access to both ocean trade and extensive inland markets, Oregon also has a rare combination of such things as rich resources from the soil, an abundant supply of electric power at rates among the lowest in the nation, plus a vigorous new determination to develop at an accelerated rate as it begins its second century of growth.

AN AREA SURVEY by **Industrial Development**
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THE NATIONAL GUIDE TO INDUSTRIAL PLANNING AND EXPANSION



The goldleafed pioneer figure, looking west, atop the Oregon Capitol of Salem symbolizes the westward march of the state's white settlers. This front view of the building shows part of the beautiful landscaping of the Capitol Mall area.

OREGON MOVES

THERE is a classic cycle in the industrialization of an area which possesses vast natural resources. In the first phase, there are established the basic "extractive" industries—mining, lumbering, and energy production. Frequently, basic products are shipped elsewhere for additional processing and refinement.

In the second phase of development, the area finds opportunities for converting its basic materials into end products. For example, primary metals may be converted into auto parts; plywood may go into furniture. The area enjoys maximum value added by manufacture, develops a sound, diversified economy.

Oregon today is moving from Phase I into Phase II and the process is uncovering a host of new opportunities for alert, expansion-minded firms. Evi-

dence of diversification is to be found everywhere.

Here is a case in point: A few months ago Precision Castparts Corporation, of Portland, announced completion of an expansion program which increased its plant facilities and payroll by 50 per cent.

Precision makes intricate high-temperature, high-strength metal parts for a long list of missiles, including the Titan, Thor, Atlas, Hercules, Bomarc and Nike. Thus, here in this land of tall timber, extensive farms, and important mining and seafood industries, there has emerged a pattern of broadened industrial activity which heralds a great new era of growth for Oregon.

Another burgeoning firm in this new pattern is Tektronix, Inc., the production activities of which are all located

in the Portland area.

The company produces cathode-ray oscilloscopes which are fast becoming a basic tool in a great many areas of science and engineering. Organized in 1946, Tektronix today employs 2,800 persons and has risen to become the leader in its particular branch of the electronic instrument business.

A particularly interesting aspect of the company is that while it is an Oregon firm, owned and controlled by Oregonians, about 99.7 per cent of its business comes from outside the state, and this year some 20 per cent of the income came from foreign trade.

In taking a further look at Oregon's diversification picture you will find such things as model airplanes and toys being manufactured by American Junior Aircraft Company; a variety of

When you look at Oregon today you will find that a significant change is taking place, a change from emphasis on the basic "extractive" industries to a pattern of ever-growing diversification. For you, this could mean opportunities to develop new products and find new markets in an area that is literally the nation's last frontier.



Oregon's 37-year-old Governor Mark O. Hatfield, who assumed office January 12, 1959, has had a distinguished career as an educator, religious and civic leader, and in public office. Under his guidance Oregon has renewed impetus for industrial growth.

INTO PHASE II

plastic products being produced by Beman Plastics; fork lift trucks and material carriers coming from Gerlinger Carrier Company, and canned fruits from Rogue River Packing Company.

The Ray F. Becker Company makes pump island steel facings, while Harvey Aluminum and Reynolds Metals produce basic aluminum. Food concentrates and crude drugs are manufactured by Bio-products Company, automatic wire strapping machines come from Cranston Machinery Company, and insecticides and weed killers are the products of Chipman Chemicals.

Sportswear made by Jantzen, Pendleton Woolen Mills, and White Stag, all with headquarters in Oregon, is known the world over. Willamette Iron & Steel Company's activities include items like hydro-electric and nuclear work, metal-

lurgical equipment, valves, fabrications and machinery, and ship building.

Cold storage doors and space saver sectional shelving are manufactured by Birkenwald Manufacturing Company, and Little Iron Works makes furniture and wire products.

McKinnon Enterprises is engaged in aircraft design and fabrication. And, so the story goes. These are only examples picked from among hundreds of firms which today exemplify the diversification trend in Oregon.

Industrial Expansion

A characteristic, also, of the Oregon industrial picture is the remarkable rate at which new industries continue to come in, as well as the extent to which existing industry is expanding.

Here are some examples of recent new developments in the state: A new plant was announced for Albany in August this year by Wood Fiber Company. The \$1.5 million particle board plant will be on a 15-acre tract and has been designed to use mill waste not adaptable to shipping for use at the nearby plant of Western Kraft Paper. To have a capacity of 125 tons of board a day, it will employ about 40 workers.

A major new expansion is that at Georgia-Pacific Corporation which will have a new plant at Springfield. Output of the facility will be almost entirely 100 per cent sanded plywood, and it will have a capacity of 10 million square feet of the wood a month. With a floor area of 180,000 square feet, it will provide employment initially for about 200 men.



The Super Goose is a four-engine executive amphibian airplane built by McKinnon Enterprises of Sandy, Oregon. The company is owned and operated by Angus McKinnon who produced the world famous Super Widgeon.



Steve Yih (left), general manager of Wah Chang Corporation, Albany, and Jim McClain, production manager, look at zirconium "sponge" produced by the plant. The facility is capable of producing more than 13,000 pounds of zirconium a day.

DIVERSIFICATION AND GROWTH



Empire Pre-Stress Concrete of Oregon built these huge pilings which went into construction Dock Commission's multimillion-dollar cargo pier at Portland. The pilings, shown being lifted by gantry cranes, are 120 feet in length and are the longest precast, prestressed such pilings ever produced in the state.



Samples of laminated panel products being manufactured by Columbia Laminating Company, North Portland, are examined by Mrs. Sharon Hohnstein. At left is an unusual modular structural wood panel designed by the firm for single wall types of construction.

Recently put into operation was the new \$1.5 million plywood mill of Dwyer Lumber Company at Portland. This installation has an annual capacity of 42 million square feet of plywood and provides employment for 75 persons.

New near Hermiston is a \$900,000 feed mill being built by Pendleton Grain Growers. Scheduled for completion next March, the mill will provide facilities for processing some 155 tons of grain, forage and feedstuff in an eight-hour shift.

All these operations were announced during this year and, as noted above are just examples of the many new developments in Oregon during 1959.

This is evidenced by the fact that compilations made by the research department of INDUSTRIAL DEVELOPMENT show that in the period from January through October this year there were 45 new plants, each employing 25 or more persons, announced for Oregon.

Distribution activities also are of ever increasing importance in Oregon. Here are some of the new enterprises in that field:

Under way in Portland is work on a multimillion-dollar distribution center for Montgomery Ward & Company. It will serve the company's catalog and retail stores in Oregon, Washington, Idaho, Montana and Alaska.

Also at Portland is a new \$450,000 distribution plant for Halton Tractor Company. On an 18-acre site, the facility has 50,000 square feet of floor space.

On a seven-and-a-half-acre tract in Milwaukee Industrial Park a new warehouse, costing \$358,490, was announced recently by Rudie Wilhelm Warehouse Company, Inc. The building has 108,000 square feet of space. With the land, the new project represents an investment of more than \$600,000.

Another enterprise in Oregon which is known throughout the nation is the organization called Harry and David, operator of the Bear Creek Orchards at Medford. Featuring many kinds of fruits, the firm ships to all parts of the country. A specialty is the "Fruit of the Month Club" through which one may order a different fruit package to be received, or sent as a gift, each month in the year.

Why It's Happening

The fact of this steady industrial growth is your proof that Oregon offers you much to consider in your site selection and plant planning for instal-

lations to serve the great Northwest of the United States, as well as the nearby Canadian provinces.

Here are some typical comments from business leaders: Robert B. Pamplin, president of Georgia-Pacific Corporation: "Much of Georgia-Pacific's vast timber ownership is located in Oregon's fertile Pacific coast range. The corporation operates 11 plants in Oregon, manufacturing plywoods, kraft paper, container board and pulp, lumber and timbers, hardboards and other quality forest products . . . We are proud to be citizens of Oregon and look forward to a challenging period of growing with the Northwest."

Howard Vollum, president of Tektronix, says: "With fast modern transportation shrinking distances so much, Tektronix has shown that manufacturers in Oregon can serve the nation in competition with those in other areas. The real asset which Oregon offers is a truly superior and productive work force. These descendants of the pioneers have ability and willingness to master new jobs which make it a real pleasure to manufacture today's complex devices in Oregon."

In April of last year work was started on a new shopping center in Portland called Lloyd Center which, when completed in 1960, will cost \$100 million and will be close to the largest if not the largest in the nation. It is unique in that it is located in the geographical center of Portland.

Concerning that project, President Carol M. Shanks of Prudential Life Insurance Company of America, observed: "Oregon is moving into its second century as a state with exciting

prospects for sound economic growth. We, in Prudential, are happy to have an opportunity to contribute to that growth by lending more than \$26 million to help finance the Lloyd Center Project and Sheraton Hotel in Portland. This is the largest long-term mortgage ever made by our company."

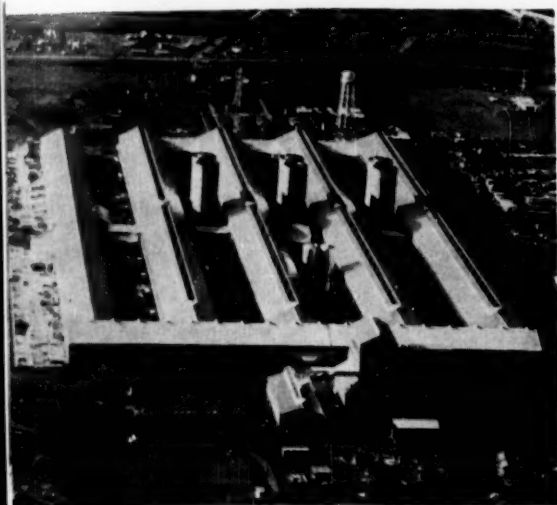
A. R. Fisher, chairman and president of Johns-Manville Corporation, points out that the decision of his company to locate a plant near Klamath Falls in Oregon "was due in large part to the friendly encouragement and cooperation given to us by many local, state and federal individuals and agencies. We are glad to contribute to Oregon's economy by converting a hitherto almost useless natural resource, lodgepole pine, into quality insulating board building materials."

In connection with the recent \$50 million investment, on new construction made by Harvey Aluminum at The Dalles, an official noted: "The state of Oregon offers American industry some advantages through its Department of Planning and Development. Low cost power, natural resources, and major transportation facilities, both rail and ocean, should make Oregon a reasonable industrial site for today's requirements and tomorrow's planning."

Then, here's what Oregon's young Governor Mark O. Hatfield has to say: "We strongly believe that our state is truly one of the last frontiers for industrial growth in these United States, and we would like to invite industrial organizations of all kinds throughout America to investigate seriously the opportunities for growth in our community."

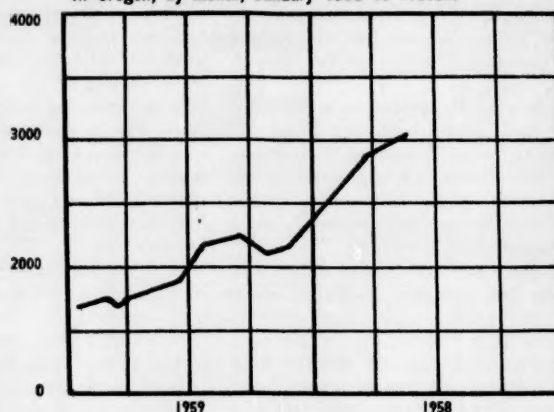


Omark Industries is located in this modern plant at Portland. The building has 66,000 square feet of space. Omark makes saw chains and power-actuated fastening tools. The company owns additional acreage close by for future expansion.



The Harvey Aluminum plant at The Dalles is an example of an enterprise that was attracted to Oregon because of an abundant supply of low cost power.

Production Worker Employment In Electrical Machinery Manufacturing In Oregon, By Month, January 1958 To Present



In Oregon's diversification picture, electrical machinery manufacturing is assuming ever-growing importance. This fact is illustrated in the chart showing the steady expansion of employment in that industry.

Let's take a look then, at the basic factors which have led up to the development of Oregon's economy as it is today and which indicate what the opportunities for the future may be.

A Century of Growth

A century ago about 44,000 persons made up Oregon's population, scattered thinly in various parts of the state. Of the total, some 16,000 had occupations, including an estimated 7,000 farmers, a few fishermen, 1,500 miners, 800 workers in manufacturing, and about 6,700 in various trade, service and related occupations.

In the years that have followed, Oregon's basic economic activities—farming, fishing, mining and manufacturing—attracted many persons to the state. Around these basic industries have developed corollary retail, wholesale, service, construction, utilities, transportation and related non-basic functions which have grown particularly fast in the postwar period. In fact, the latter this year employed more than twice as many as were employed by the basic industries.

This change has been a recent trend, as during Oregon's first 70 years there was a steady growth in the number of farms and in farm population, with a tapering off of that growth since then. However, the acreage harvested, the yields per acre and farm output have continued to rise.

Although the rise in income from farms has been noteworthy, it did not

keep pace with the growth of income from the forests. After 1930, agriculture was replaced by timber products as Oregon's number one industry.

However, non-forest products manufacturing has been growing fast in recent years and soon may represent a greater share of the basic industries than either agriculture or forest industries. And, as was stressed in the beginning of this report, diversified industries not using wood for raw materials have been expanding briskly in recent years.

The Work Force

Oregon rounded out its first century of growth with a population currently estimated at 1,780,000.

Of that total, as of June—1959, there were 700,600 persons employed and 31,500 available for work.

A breakdown of the figures, which were supplied by the Oregon State Department of Employment, shows that 108,100 workers were employed in agricultural pursuits, while 592,500 were on nonagricultural jobs.

There were 497,500 wage and salary workers, 152,300 of whom were in manufacturing.

In manufacturing, activities in lumber and wood products still hold the lead, having 78,200 workers, while the production of food and kindred products was second with 23,300 employees. Other examples of manufacturing employment included 7,900 workers in

paper and allied products, 5,100 in primary metals, 5,000 in fabricated metals, and 5,100 in machinery (except electrical). Electrical machinery employed 3,900.

Manufacturing production workers at mid-June were working an average of 38.9 hours a week, earning an average of \$2.48 an hour and \$96.36 a week. Those figures compare with an average work week of 38.3 hours with hourly earnings of \$2.38 and weekly earnings of \$91.19, for the corresponding period of 1958.

The Great Forest Industry

The first sawmill was built in Oregon 123 years ago by Thomas McKay near Champoege, and lumber manufacturing has been going on in the state since that time.

However, despite the cutting that has been going on in all those years, Oregon today has enough saw timber standing in its fabulous forests to lay a floor an inch thick over the entire states of Massachusetts, Connecticut, Delaware and Rhode Island. To put it even more dramatically, there is enough timber in Oregon to rebuild every dwelling in the United States.

More than half of all the plywood produced in the nation comes from Oregon, and also originating here are one-fourth of the soft wood lumber and one-fourth of the hardwood.

As noted in the report on employment, the forest industries provide more jobs than any other industry in Oregon

and account for nearly two-thirds of the state's manufacturing payroll.

The 434 billion board feet of Oregon's timber covers 30.3 million acres which is nearly half of the state's land area. Most of this is commercial forest land, and about 10 per cent is forested land valuable chiefly for recreation and water production.

Another historical note is that the first pulp and paper mill built in the state was constructed in 1866 at Oregon City. Plywood had its commercial origin in Oregon in 1904. A box and barrel factory in St. Johns manufactured the first panels of cross-banded and glued veneers at Portland's Lewis and Clark exposition in 1905.

In 1946 Oregon developed a fibre-board manufacturing industry, and about one-fourth of the nation's hard-board manufacturing capacity is now in eight Oregon plants.

The western area of Oregon is the douglas fir region, while the eastern part is the ponderosa pine region.

Altogether, the western region has 79.6 per cent of Oregon's total sawtimber volume. The breakdown is: 59 per cent douglas fir, 6.4 per cent western hemlock, 5.3 per cent true firs, 1.4 per cent ponderosa pine, and 1.1 per cent other softwoods.

The eastern region has the remaining 20.4 per cent of the volume. It is made up of 13.5 per cent ponderosa pine, 2.5 per cent douglas fir, 2.1 per cent true firs, and 2.3 per cent other softwoods.

Since Oregon actually has one-fourth of the nation's entire sawtimber supply, it is obvious that lumbering and related activities will continue indefinitely to be a major factor in the state's economy. It means also that outstanding opportunities still remain for development of many more new manufacturing operations directly or indirectly related to the timber resources.

Agriculture Ranks Second

Second only to lumber is importance, agriculture in Oregon brings farmers an average of \$400 million annually from cash crops.

From the standpoint of return to farmers, meat animals lead by producing 19 per cent of the total farm income. Other crops in order of importance include wheat and barley, 18 per cent; dairy products, 13 per cent; fruits and nuts, 13 per cent; seeds and specialty crops, 9 per cent; chicken, eggs, turkeys, 8 per cent; vegetables, 8 per cent; nursery and farm forest, 6 per cent; hay and miscellaneous, 4 per

WESTERN OREGON

Douglas Fir Region

ESTIMATED NET VOLUME OF LIVE SAWTIMBER (trees 11 in. d.b.h. and larger) IN MILLIONS OF BOARD FEET (log scale, Scribner rule)

County	Latest Information Date	Total Timber Volume Per County	Private	Timber National Forest	Ownership Bureau of Land Mgt ¹	Other Public Bodies ²
Benton	1945	2,116	858	462	671	125
Clackamas	1945	19,972	3,443	15,817	664	48
Clatsop	1952	6,561	5,015	.....	53	1,493
Columbia	1954	2,406	2,258	.....	35	113
Coos Curry Douglas Jackson Josephine	3.... 1947-49	152,562	58,293	48,777	36,373	9,119
Hood River	1954	4,397	290	3,907	3	197
Lane	1956	97,000	21,000	64,000	11,000	1,000
Lincoln	1955	20,522	9,262	9,664	937	659
Linn	1945	30,745	16,077	12,681	1,853	134
Marion	1945	8,933	2,355	5,944	634	.....
Multnomah	1946	2,562	139	2,402	10	11
Polk	1945	3,978	2,515	189	1,194	80
Tillamook	1945	6,426	3,952	1,268	284	922
Washington	1945	1,541	1,431	.....	87	23
Yamhill	1945	1,473	890	161	341	81
Total		361,194	127,778	165,272	54,139	14,005

¹ Includes revested grant lands and public domain lands.

² Includes state, county, municipal and Indian lands.

³ Information for these individual counties not available.

EASTERN OREGON

Ponderosa Pine Region

ESTIMATED NET VOLUME OF LIVE SAWTIMBER (trees 11 in. d.b.h. and larger) IN MILLIONS OF BOARD FEET (log scale, Scribner rule)

County	Latest Information Date	Total Timber Volume Per County	Private	Timber National Forest	Ownership Bureau of Land Mgt ¹	Other Public Bodies ²
Baker	1945	3,485	892	2,537	42	14
Crook	1952	5,605	902	4,622	76	5
Deschutes	1953	6,745	665	5,986	75	19
Gilliam	1945	2	2	.....	.....	.....
Grant	1945	11,722	2,477	8,954	197	94
Harney	1953	4,256	159	3,982	103	12
Jefferson	1953	5,207	942	1,939	23	2,303
Klamath	1946	13,544	3,719	5,390	425	4,010
Lake	1947	10,531	2,911	7,296	89	235
Malheur	1945	30	15	12	3	.....
Morrow	1954	1,766	710	1,049	7	.....
Sherman	(No forestland or timber volume)					
Umatilla	1945	3,130	898	2,087	21	124
Union	1945	3,212	856	2,270	29	57
Wallowa	1945	4,470	1,092	3,237	31	110
Wasco	1945	5,062	349	2,905	16	1,792
Wheeler	1953	3,620	1,474	2,051	86	9
Total		82,387	18,063	54,317	1,223	8,784

¹ Includes revested grant lands and public domain lands.

² Includes state, county and Indian ownerships.

cent, and other livestock, 2 per cent.

Oregon ranks No. 1 nationally in the production of winter pears, commercial filberts and green snap beans. It is second in the output of sweet cherries, plums and prunes, and walnuts. As a producer of peas the state ranks third, while it is fourth as a producer of onions.

As a result of this extensive agricultural activity, food processing is the second ranking manufacturing industry in Oregon. Approximately 40 different crops are available for packing.

The nation's frozen food industry actually began in Salem, the state's capital city, in 1900. Since that time Oregon's frozen food pack has increased an average of 15 per cent each year, and the state now packs 15 per cent of national production. In the canned foods field, Salem ranks second in the nation as a processor.

An important contributing factor in Oregon's farm picture is the great variety of climate and topography, allowing for a remarkable diversity in crop and livestock production.

In areas which otherwise might be barren, the application of irrigation water provides highly productive and dependable crop lands. Irrigated land totals around 1.5 million acres, and projected figures show some 2.833 million acres under irrigation by the year 2000.

As of this year Oregon has approximately 55,000 commercial farms in op-

eration, with an average value of \$36,000 each and a total value of \$1.957 billion.

It may be seen, therefore, that while in the second phase of Oregon's economic progress the importance of farming will decline in relation to the growth of such new industries as electronics and related fields, the basic industry of food raising must continue to grow and will continue to offer new opportunities for the development of farm oriented industry.

In the food picture Oregon's fishing industry also is important, as fish packed by canners and freezers in the state has an estimated 1959 value of \$40 million. Approximately five million pounds of fish were frozen this year, while the balance of the estimated 55 million pounds of catch landed here were sold for fresh consumption or for canning.

Principal commercial types of fish in the Oregon catch are salmon, tuna, bottom fish (sole, rockfish, halibut, cod, and so on), and shellfish.

Low-Cost Power

Oregon is in the area served by the "Northwest Power Pool." Since practically all generation of this pool comes from economical hydroelectric sources, Oregon has delivered electric power rates among the lowest in the nation.

The Power Pool is a region-wide operation made possible through the

regional transmission grid of the Bonneville Power Administration, a self-supporting, self-liquidating agency of the U. S. Department of the Interior, and the region's other electric generating facilities, both privately and publicly owned.

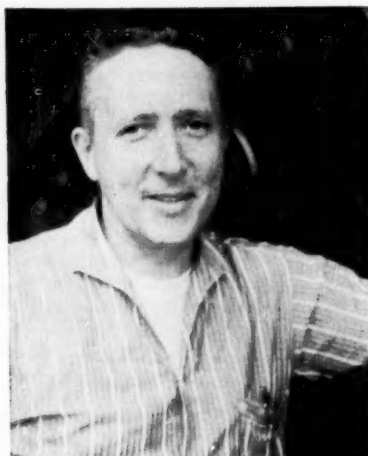
This high-voltage, high-capacity transmission system provides the link between Federal hydro-electric installations and electric utilities throughout the entire Pacific Northwest.

It is noteworthy that no single utility dominates the state's power distribution facilities. Many specific areas are served by privately owned utilities plus municipal systems, publicly owned utility districts and R.E.A. cooperatives.

Many of the major dams now in existence on the Columbia River have been constructed by the Federal Government. The power generated at Federal installations is transmitted over the lines of the Bonneville Administration. The latter markets the federally-generated power throughout the area on a "postage stamp" basis—that is, the same rate, regardless of geographic location (except at the dam site where a lower rate is available).

The integrated operation of the Power Pool makes possible maximum uses of power resources, dependability, minimum transmission cost and flexibility in meeting hour-by-hour demands.

The five privately owned electric utility systems in Oregon are all mem-



While Jim Hill of Pendleton describes himself as a wheat farmer, he is actually the manager of a highly scientific agricultural operation which is setting new patterns for area development. One project involves diversification into hog raising and cattle raising which may eventually lead to packing plants and other processing plants in the Eastern Oregon region.

AGRICULTURAL PRODUCTION

Crop production based upon the return to farmers:

Meat Animals	19%	Seeds and Specialty Crops	9%
1,490,115 Cattle and Calves		Chickens, Eggs, Turkeys .	8%
860,650 Sheep and Lambs		Vegetables	8%
135,913 Hogs and Pigs		Nursery and Farm Forest	6%
Wheat and Barley	18%	Hay and Miscellaneous ..	4%
48,656,000 bushels		Other Livestock	2%
Dairy Products	13%		
1,208,000 pounds of milk			
Fruits and Nuts	13%		100%

A COMPARISON OF TYPICAL ELECTRIC BILLS

This table illustrates that Oregon electric rates are among the lowest in the country.

Billing Demand Consumption	Monthly Commercial Power Service			Monthly Industrial Power Service				
	6 Kw 750 Kwh	12 Kw 1500 Kwh	30 Kw 6000 Kwh	150 Kw 30,000 Kwh	500 Kw 60,000 Kwh	100,000 Kwh	200,000 Kwh	1000 Kw 400,000 Kwh
Oregon								
Portland	\$15.40	\$25.85	\$85.25	\$388.00	\$541.00	\$ 904.00	\$1,209.00	\$2,361.00
Salem	15.40	25.85	85.25	388.00	541.00	904.00	1,209.00	2,361.00
Eugene	10.65	21.30	62.16	311.00	410.00	835.00	1,085.00	2,120.00
Seattle	12.45	23.70	85.20	305.00	437.00	928.00	1,348.00	2,598.00
San Francisco	25.87	47.27	158.42	520.00	784.00	1,533.00	2,318.00	4,343.00
Los Angeles	16.78	30.85	88.90	344.00	541.00	1,032.00	1,624.00	3,114.00
Dallas	26.44	50.51	152.22	576.00	798.00	1,525.00	1,977.00	3,583.00
St. Louis	28.63	50.25	154.10	543.00	780.00	1,538.00	1,724.00	4,957.00
Nashville	14.00	22.80	78.00	360.00	500.00	1,010.00	1,310.00	2,410.00
Cincinnati	29.24	58.48	141.75	568.00	780.00	1,607.00	2,211.00	4,332.00
Buffalo	19.11	31.57	106.36	423.00	582.00	1,197.00	1,727.00	3,391.00
Weighted Average For U. S.	NA	52.54	162.88	621.00	NA	NA	NA	NA

Source of data: Typical Electric Bills, 1958, Cities of 50,000 population or more, Federal Power Commission.

NA indicates that statistics is Not Available.

Here perhaps are combined both greater reliability and lower delivered power rates than can be provided anywhere else in the nation!

bers of, or interconnected with, the Northwest Power Pool. These utilities serve close to 85 per cent of the total number of consumers in the state.

The five companies are California-Oregon Power, California-Pacific Utilities, Idaho Power, Pacific Power & Light, and Portland General Electric.

Publicly-owned systems serve one-sixth of the total number of electricity consumers. These systems include 10 municipalities, seven per cent; four Peoples' Utility Districts, three per cent, and 15 cooperatives, six per cent.

Abundant Natural Gas

Natural gas is brought to Oregon from the San Juan Basin of New Mexico via a pipe line 22 inches in diameter and 1,250 miles long which is operated by Pacific Northwest Pipeline Corporation.

In addition to this, the Westcoast Transmission Company, Ltd., completed late in 1957 a 650-mile, 30-inch line from the Peace River Fields in North British Columbia and Alberta, Canada, connecting with Pacific Northwest Pipeline's system at the U. S. Canadian border.

From this point Pacific Northwest has constructed a 26-inch diameter line down through the Portland area to connect with their 22-inch line at Umatilla in Oregon.

Pacific's line has a daily capacity from the San Juan Basin into the Pacific

Northwest in excess of 200 million cubic feet, while Westcoast's line has an ultimate daily capacity of more than 600 million cubic feet. This makes a daily capacity total of more than 800 million cubic feet.

Because the capacity of the two transmission lines considerably exceeds present firm demands, an unusually large volume of gas is economically available for use by industries on an interruptible basis.

As a result of having excellent transportation facilities, both by land and water, Oregon has readily available in most areas such other fuels as oil, coal and wood wastes.

Good Transportation Network

In addition to the great port of Portland, providing access to worldwide shipping, Oregon has an excellent system of highways criss-crossing the state, and good rail and airline services.

The highway system, totaling in excess of 63,000 miles, is constantly being extended and improved. These improvements, which include multiple lanes, bypasses, pullout lanes and limited access roads, are resulting in savings of dollars and time for motorists and highway transport users and operators.

This activity is in addition to the work under way on the Federal Interstate Highway System. One of the highways on this system crosses the northern part of Oregon to Portland and connects on the east to transcontinental sys-

tems and to major north-south routes on the system. At Portland it connects with the north-south route that extends from San Diego to the Canadian border at Vancouver.

The five major railroad systems serving Oregon are the Great Northern, Northern Pacific, Southern Pacific, Spokane, Portland and Seattle, and the Union Pacific. They provide rail service, of course, to all parts of the nation as well as to Canada.

Nine airlines serve Oregon with both passenger and air freight and air express service. Five of these airlines are major trunk carriers.

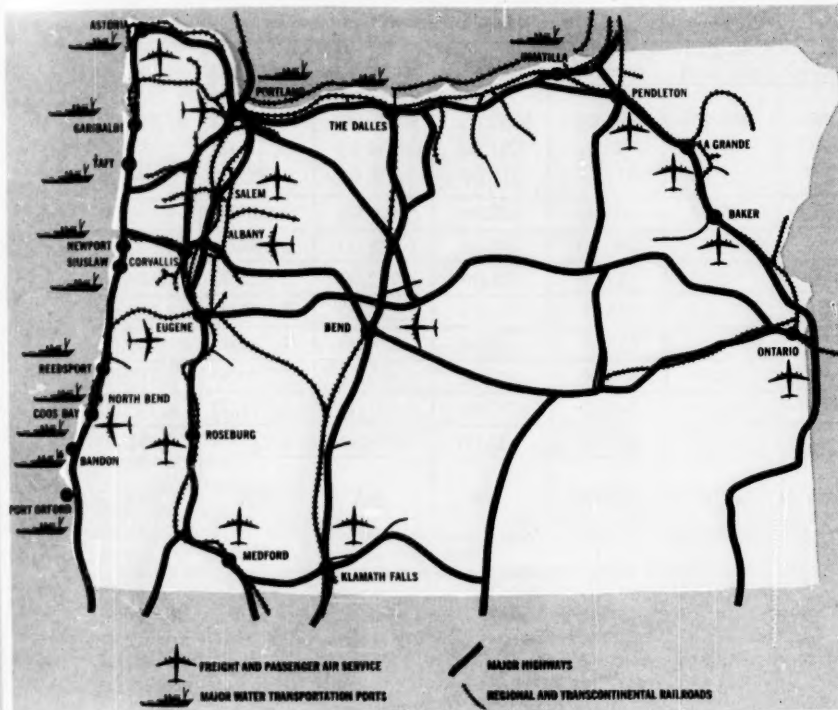
Motor lines include 19 regular bus lines and 56 irregular carriers for passengers, 56 regular motor freight carriers, 150 contract carriers, and 969 irregular carriers.

A highlight in Oregon's transportation picture is the new \$6 million Portland International Airport which was completed in August, 1958.

The terminal, begun in 1956, is the mainstay of a \$13 million airport expansion and modernization program undertaken by the Port of Portland.

The new terminal straddles the current 8,800-foot runway and the river-side location of the second 8,800-foot runway to be completed in 1960. Some 750,000 passengers used the new facilities during the first year of operation, and by 1963 it is expected that the million mark will be reached.

OREGON HAS AN IMPRESSIVE TRANSPORTATION PICTURE



A Major Seaport

The seaport at Portland is 101 miles inland from the mouth of the Columbia River. Through its modern, efficient facilities pass a larger volume of dry cargo than is shipped by any other West Coast port.

Portland is located on the Willamette River just a few miles from its confluence with the Columbia, and a clear 35-foot channel is maintained all the way to that city.

Barge transportation is regularly available upstream on the Willamette, and on the Columbia to Pasco, Washington. Seasonal barge travel can extend as far inland as Lewiston, Idaho, on the Snake River.

In July this year the Portland Commission of Public Docks awarded a \$2.25 million contract for construction of a new bulk cargo discharging pier at Terminal No. 4.

To be in operation by the middle of next year, the new facility will be the first of its kind on the Pacific Coast. It is designed to handle imports of ores, ore concentrates, and other bulk commodities moving over the Portland public docks. A 900-ton per hour bulk unloading tower will be erected on the finished pier.

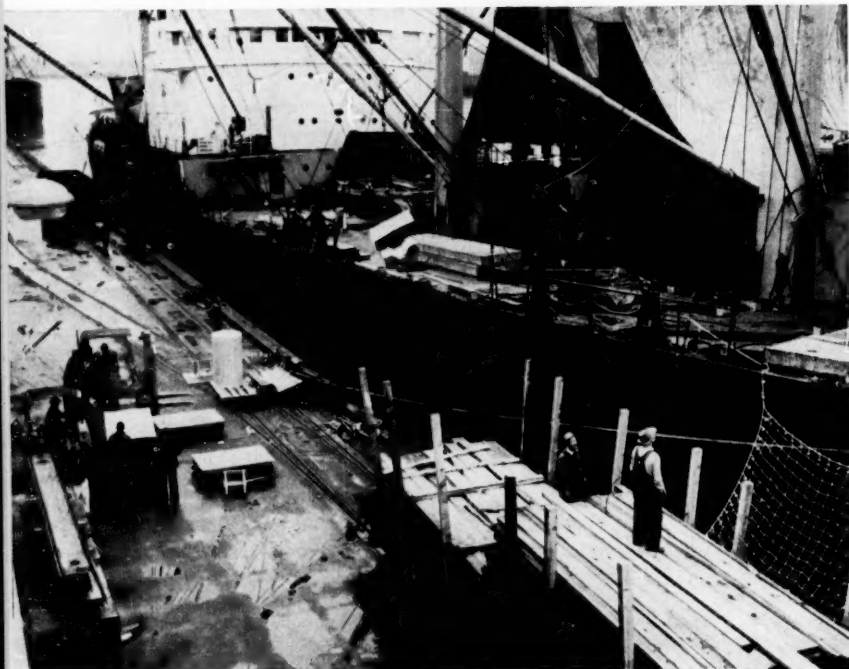
Completion of this new project will give Portland two additional deep-water berths with a minimum depth of 35 feet and will include a 100-car capacity rail holding yard adjacent to the pier, and several acres of open storage.

While the initial project is designed for overland transportation of incoming ocean cargoes, plans call for a future large basin with a conveyor belt to discharge cargo directly onto barges. The full project will cost an estimated \$3.150 million.

Making possible the handling of the tremendous maritime commerce in the Portland harbor are an estimated 145 different tugboats and 180 barges of all shapes and sizes which work in the area.

Tugs assist most of the 1,500 big ships arriving in the port each year. They also haul and pull a substantial amount of the city's maritime commerce—an estimated 3.5 million tons annually—to and from other river and ocean seaports, and within the port area itself.

Of particular interest to those industrialists concerned in any way with maritime activities is how agencies of local and federal government combine with trade associations and private en-



Lumber constitutes one of the important categories of cargo shipped out of Oregon. Here a load is being made ready to be lifted aboard a big ship in the Port of Portland.

terprise to offer you complete service.

Close to a dozen different organizations, all closely allied and well coordinated, share in the promotion, protection, maintenance and regulation of the harbor and its commerce.

The Port of Portland Commission is the Northwest's oldest public port. Its three-fold function is to assist and promote shipping, aerial commerce, and industry. The commission owns a multi-million-dollar ship repair facility; maintains the harbor and portions of the 101-mile ship channel to the sea; owns and develops waterfront lands for maritime and general industrial use, and operates two aviation facilities—the Portland International Airport and a secondary flying field at Troutdale.

The policies and activities of the commission are directed by a board of nine commissioners, appointees by the Governor of Oregon for four-year terms.

Operating the city's three cargo terminals is the Commission of Public Docks of Portland. This agency is responsible for the development of the city's maritime commerce and provision of facilities to handle it, and it is an autonomous department of city government.

Additional agencies which render various services to aid industry in connection with the port include the World Trade and Shipping Department of the Portland Chamber of Commerce, the Portland Freight Traffic Association, the local field office of the U. S. Depart-

ment of Commerce, the U. S. Customs Service, Portland Merchants Exchange, and others.

Money and Markets

The income of Oregon citizens amounted to more than \$2,000 per person in 1958, totaling up to approximately \$3.7 billion. This constitutes a tremendous immediate market for an infinite variety of goods and services.

Included in the primary market area are Northern California and Nevada on the South, Washington on the North, and Idaho on the East. And, of course, its fine ports give Oregon an international market, while the other excellent transportation facilities give the state easy access to the whole Pacific coast and on eastward to the mid-continent area.

Backing up Oregon's economic structure is a strong banking system. The first state bank was formed at Portland in 1859 with resources of \$10,000. Six years later the first national bank was formed in the state.

Keeping pace with the general growth of business and industry banking continued to grow steadily, with the greatest expansion having come in recent years. Bank deposits in the state increased, for example, from \$400 million in 1940 to \$2.2 billion in 1959. There are 57 banking firms.

Another indication of the prosperity of Oregonians is the fact that the life insurance they have in force has increased from \$1.8 billion in 1950 to

a current \$4 billion.

The value of products manufactured in Oregon this year will reach an estimated \$1.8 billion, including lumber with a value of \$575 million.

Oregon's Tax Structure

The State of Oregon has no sales tax nor any direct levy on intangible property such as stocks, bonds, securities, etc. The local governmental agencies—county, city, etc.—derive most of their operating funds from taxes on land, buildings, tangible personal property and license fees. The state receives its major financial support from the personal income tax and excise tax on corporations.

Real estate and buildings are taxed on the basis of an assessed valuation at a rate of taxation fixed locally to meet the budget requirements of the local taxing agencies. For example, Multnomah County (Portland) is using an assessment ratio of 45 per cent of "true cash value" or "market value" for the 1959-1960 tax year.

The consolidated tax rate in the City of Portland for the fiscal year of 1959-1960 has been established at 56.4 mills per dollar of assessed valuation.

The levy is composed of the following items:

Multnomah County	13.0 mills
Port of Portland	1.3 "
Schools	24.7 "
City of Portland	17.4 "
Total	56.4 mills



Engineer Bob Herrington is port manager at Coos Bay and as such spearheads efforts to attract industry to the scenic Pacific coast area adjacent to North Bend, Coos Bay and Empire.



Around 1,500 big ships use the Port of Portland each year. Through its facilities, shown here in an air view, passes a larger volume of dry cargo than is shipped by any other West Coast Port. Working in the harbor are an estimated 145 different tugboats and 180 barges of various shapes and sizes.

Personal Property Taxes

Raw materials, goods in process, finished goods, furniture and fixtures, machinery and equipment are taxed on the basis of an assessed valuation at the same rate as real estate and buildings in the tax district in which they are located. Tax assessment day for personal property is January first of each year. However, taxpayers have the option of reporting inventories on the basis of a monthly average for the previous year. Inventories are taxed on their book value. Furniture, fixtures, machinery and equipment are taxed on the basis of their long-term depreciated or replacement value.

With respect to grain, fruit, vegetables, nuts, hops, wool, poultry or fish in the hands of a farmer, producer or processor, the assessor shall cancel the assessment levied against such items provided they are sold and shipped to another point on or before April 30th of the year of assessment, and further provided such proof of sale and shipment is in the hands of the assessor on or before May 15th.

Personal property in transit through the state moving in interstate commerce, and consigned to a warehouse in Oregon for storage in transit to a final destination outside Oregon, is not subject to the personal property tax.

Corporation Excise Tax

Any corporation doing business in the state of Oregon must pay an excise tax based on the net income derived

from its Oregon operations. Allocation of income for corporations doing business in other states is based on three factors:

- (a) Value of real and personal property;
- (b) Wages, salaries and other compensations; and
- (c) Gross sales less returns and allowances.

In each instance the percentage that Oregon business bears to the total is determined and then the average of those three percentages is used to determine the amount of income derived from Oregon business.

The base rate of this excise tax is 6 per cent on the net income for general business corporations. (Banks pay at slightly higher rates.) However, manufacturing corporations can offset up to one-third of this tax by the personal property taxes paid on raw materials, goods-in-process and finished goods. This makes the effective rate for most manufacturing corporations 4 per cent on net income.

In calculating the net income of a corporation for purposes of determining the state excise tax, Federal income taxes paid can not be used as a deduction. However, the excise tax paid in Oregon can be used as a deduction in calculating the Federal income tax. This feature tends to reduce the amount of the Federal income tax paid and should be considered in comparing the total tax burden in Oregon with some other state.

Corporations shipping into the state that are not subject to the excise tax may be subject to the corporation income tax of 6 per cent on the net income allocated to Oregon.

Personal Income Tax

Persons residing in Oregon or receiving income from Oregon sources must pay an income tax. The personal exemption of a single person is \$600, while that of married couple or the head of a family is \$1,200. A credit of \$600 is allowed for each dependent under 18 years of age, or over 18 years of age when physically incapacitated or attending school. In calculating the "net income" subject to the Oregon tax, the income tax paid to the Federal Government is deductible.

The taxable balance is subject to the following schedule of rates:

Taxable Income	Rate
On first \$ 500 of taxable income	3 %
On second 500 "	4 %
On third 500 "	5 %
On fourth 500 "	6 %
On next 2,000 "	7 %
On next 4,000 "	9 %
On taxable income above \$8,000	9.5%

In the case of a joint return of husband and wife, the tax shall be twice the tax that would be determined if the net income and applicable exemptions and credits were reduced by half. This provision is similar to the Federal income tax procedure.

Research for Growth

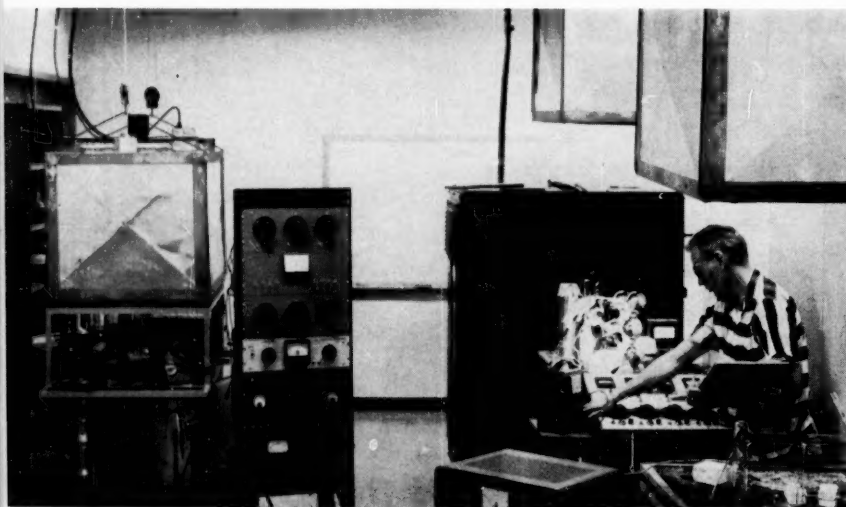
If your company is interested in the development of new products or services, and certainly most firms are, you will find that Oregon is well supplied with extensive facilities for research and development.

These highly competent physical research facilities are located throughout the state, providing means to aid industry in solving technical problems, developing new and improved products, product uses, techniques, and even whole new industries.

Important studies in a great variety of fields are being carried out by major colleges and universities in Oregon.

At Oregon State College, for instance, the School of Engineering and Industrial Arts' electrical department is active in research in such areas as electronics and electronic instrumentation, semi-conductor devices and high voltage transmission problems.

Other extensive research projects are constantly carried out by the college in the fields of agriculture, pharmacy,



Linfield Research Institute at McMinnville conducts scientific investigations and pure and applied research in the fields of physical, biological and social sciences, and engineering and mechanical arts. Shown is equipment in the new metal shop and tube fabrication plant. The facility has 12,000 square feet of space.

general sciences, bacteriology, botany, chemistry, entomology, mathematics, physics, and zoology.

The University of Oregon's research work includes a number of studies in chemical developments, as well as in biology, geography and geology, math, physics and medicine.

Portland State College's investigative activities include work in biology and physics, while research at Reed College covers research in biology, chemistry, math and physics.

Research at Linfield College is conducted in a non-profit subsidiary, the Linfield Research Institute.

The projects carried out at this facility are of particular interest to industry. In addition, for instance, to extensive studies of materials capability in the areas of glasses, metals and ceramics, the Institute engages in such research projects as field emission from metals and semiconductors, atom transport surface migration, radio frequency propagation, electron optics, ultra high vacuum, electropolishing, anodic oxidation of refractory materials, micro-machining techniques, microwave generation, and amplification and x-ray development.

State and federal government agencies which conduct research within the State of Oregon include the U. S. Bureau of Mines, U. S. Forest Service, Oregon Forest Products Research Center, U. S. Bonneville Power Administration, and the U. S. Corps of Engineers.

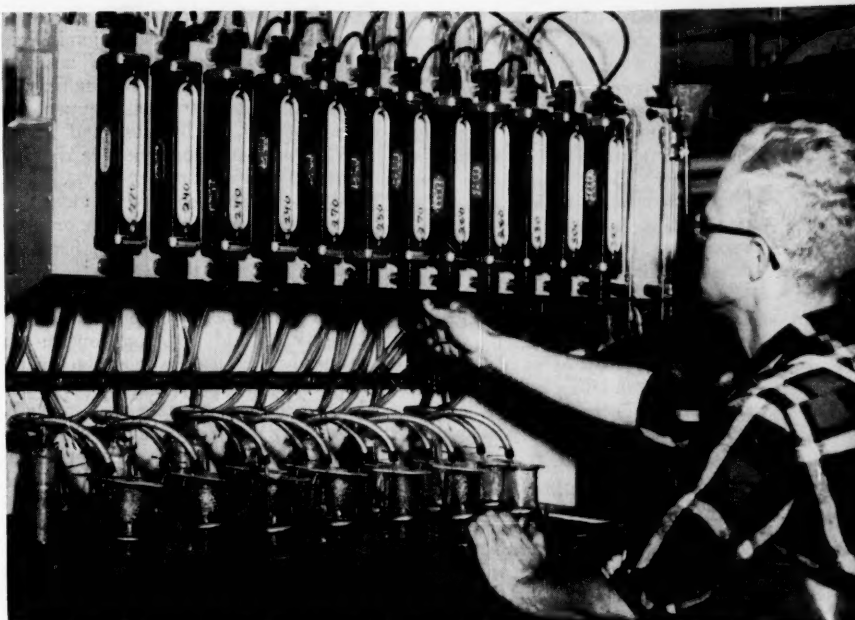
In addition to these agencies, there are a number of commercial research facilities in Oregon, providing service to industry in many fields of specialization.

Plenty of Water

Most areas in Oregon have both highly pure and an abundant supply of water. This is influenced by the prevailing wind from the Pacific Ocean which carries moisture across the state. Both the Coast Range and the Cascade Range intercept large amounts of this moisture as both snow and rain, thereby serving as reservoir areas to provide annual flows to the streams in the area.

Supplementing the surface water supplies are large amounts of ground water which may be found in many areas of the state. Further, widespread dam construction in the state and region is building up huge water storage capacity, a major safeguard against floods. Included in this construction is the series of multi-purpose dams on the Columbia River.

In many parts of the state the water



At the research facility of the U. S. Bureau of Mines in Albany, Oregon, this apparatus is used to measure corrosion rates of metal specimens in different kinds of solutions. The tank is an electric, constant-temperature bath, and specimens are suspended in the flasks reposing in the tank. Donald J. Stoops, mechanical engineer and designer of the equipment, is adjusting a valve.

is so pure—coming as it does from mountain snow melt—that it can even be used in chemical industrial processes requiring a high degree of purity. Also, streams west of the Cascade range have a total hardness of less than 30 parts per million calcium carbonate. An example is the Bull Run River which furnishes Portland's domestic supply. It has a hardness of only nine parts per million calcium carbonate.

The Columbia River, which forms the boundary between Oregon and Washington, is one of the nation's largest streams. It has an average runoff of 183 million acre-feet at its mouth, a flow exceeded in the United States only by the lower Mississippi and Ohio Rivers. The second largest river in Oregon is the Willamette, with an average runoff of 26 million acre feet.

Another point in the water picture is that Oregon has water pollution regulations that have been proved to be both sensible and practical.

Minerals in Oregon

An important part of the accelerated diversification of industry in Oregon now and in the long range future is in tapping of the state's rich mineral reserves. Widely diversified reserves of metallic and industrial minerals occur throughout the state. Many of these

deposits are virtually untapped, and are readily accessible to the needs of modern industry.

The principal known mineral deposits include sand and gravel, stone, clays, limestone, asbestos, gold, silver, copper, platinum, mercury, lead, uranium, zinc and nickel.

Latest available figures on the value of mineral output in Oregon showed a total of \$37.6 million for 1957, highest in the state's history and nearly two and a half times the 1947 value of \$15.8 million.

Besides wholly new nickel production, the increase in the 10 year period was due largely to the greater amount of mineral raw materials used in construction, such as sand and gravel, stone, cement, lightweight aggregates and clay.

Today, Oregon's annual production of nickel far exceeds that of gold which accounted for the bulk of the state's mineral wealth for almost 90 years. Oregon has the only nickel mine in the United States and is one of the five mercury-producing states.

The current outlook is that as a result of the rapid development in the area of metallic minerals, Oregon's metallurgical industries will continue to grow in size and number. Thus many opportunities are open in this field.

The Business Climate

One of the most ardent boosters of Oregon's future is Gerald W. Frank, of Salem, chairman of the Advisory Board of the State Department of Planning and Development.

In an interview, Mr. Frank stressed: "Governor Hatfield and the Oregon Legislature want new industry to come to the state, and they are doing everything they can to promote industrial development opportunities here."

Among other things listed by Mr. Frank as contributing to "the excellent business climate of Oregon" were the long-range record of good labor relations, an outstanding system of schools and colleges, competent and extensive research facilities, and good living which he described as "unsurpassed anywhere."

"I am convinced," he added, "that as Oregon enters its second century the opportunities for continued growth are virtually unlimited, for our state is literally the last frontier for new development, and I think that this growth will progress at an orderly, steady and healthy pace."

One of Oregon's young and progressive business leaders, Mr. Frank is vice president of the big merchandising firm of Meier & Frank Company and manager of the firm's Salem store.

Moves to make the business climate in Oregon more favorable were made during the 1959 session of the State Legislature.

A resolution sponsored by Associated Oregon Industries and approved by the advisory committee headed by Mr.

Frank called upon the Legislature to examine all proposed legislation in light of the state's business climate" and provided that "the legislature reaffirm its determination to treat all segments of the economy, in business and labor, agriculture, and consumer, fairly, impartially and constructively . . ."

A new measure enacted provides that each new building or structure or addition is exempt from taxation for each year of not more than two consecutive years if such building, structure or addition is in process of construction on January 1, and is being constructed primarily for use in manufacturing, processing or assembling material and is not in use or occupancy on January 1.

Another measure established in Oregon the so-called "free port" principle with respect to taxation of personal property in transit. The bill provides that personal property in transit through the state which is "moving in interstate commerce and which was consigned to a warehouse (public or private) within the state of Oregon from outside the state of Oregon for storage in transit to a final destination outside the state of Oregon shall be determined to have acquired no situs in Oregon for purposes of taxation. Such exemption shall be liberally construed to affect the purpose of this act and such exemption shall not be lost because property in storage is assembled, bound, joined, disassembled, divided, cut, replaced or repackaged. All property claimed to have 'no situs' under this act shall be designated as in transit on the records of the warehouse wherein same is li-

cated."

Also important to the prospective plant building was the bill which authorizes the creation of state development credit corporations to promote and develop the industrial and business welfare of the state, to encourage new industry and to furnish for approved and deserving applicants necessary funds for the development of every kind of business or industry where medium of credit is not otherwise readily available.

The Capital City

Located in Western Oregon, south of Portland and north of Albany, Oregon's Capital City of Salem had a population estimated at 49,100 in 1959.

The first state capitol building was erected here in 1854 at a cost of \$40,000 but was destroyed by fire while it was still under construction. Another capital was authorized by the State Legislature in 1872, at a cost of \$325,000, and the cornerstone was laid in 1873. It was used till April 25, 1935, when it, too was destroyed by fire.

The present capitol, completed in 1939 at a cost of \$2.5 million, is of "modern Greek" design with severely simple exterior lines. It is constructed of white Vermont marble, and bronze, and is topped off with a golden statue of The Pioneer.

The height of the main building is 53 feet, while the height from the ground to the top of the central tower is 128 feet and to the top of the statue, 168 feet. The building has 131,750 square feet of useable space.



Gerald W. Frank of Salem is chairman of the Advisory Board of the State Department of Planning and Development and is one of Oregon's strongest boosters.



The \$3.3 million South Salem High School is an outstanding example of the modern public school facilities available for students in all parts of the state. Altogether, Oregon has 1,088 elementary schools and 223 secondary schools.



A rustic lodge and its patio overlook Crater Lake in Oregon's Cascade Mountains. The lake, deep blue in color, is 2,000 feet deep. Wizard Island (center) is of fairly recent volcanic origin and is one of the interesting geologic characteristics of the park.



At Winchester Bay, south of Reedsport, is the scene of much activity during the fishing season. At these docks rental and privately owned boats are kept ready for the call that "the run is on." This is but one of a number of river outlets along Oregon's 400-mile coastline.

An unusual 50-year Master Plan for development of the Capitol Mall was approved by the Capitol Planning Commission and the State Board of Control in the latter part of 1957.

Proposed new structures include a Labor and Industries Building, Supreme Court Building, several office buildings, a state auditorium, governor's residence and museum.

The School System

Oregon's public school system, as well as the colleges, provide the best in educational facilities in all parts of the state. The schools are so well distributed that any prospective industrialist may be assured that his children and those of his employees will have easy access to every educational advantage.

Within the state are 1,088 elementary schools and 223 secondary schools in which well over 350,000 pupils are enrolled. The schools are well maintained, and a constant program of improvement and expansion is being carried out. In one recent year total expenditures for all purposes in the state school system came to more than \$160 million.

Besides the elementary and secondary schools, there are 24 colleges and universities in Oregon, some having been noted previously in this report.

Of particular importance to industry is the fact that each year a new crop of technically trained men and women are graduated each from the state's institutions of higher learning. Granting technical degrees are George Fox, Lewis and Clark, Linfield, Marylhurst, Oregon State, Pacific University, University of Oregon, University of Portland, Reed College and Willamette University.

In addition, the Oregon Technical Institute is a school that has been set up to (1) provide post high school instruc-

tion and training in the highly-skilled, semi-professional, and technological fields of study including, but not limited to, engineering, science, medicine, agriculture, business methods, domestic economy, technical-mechanical arts and technical-occupational training; and (2) provides post high school instruction in general education subjects to assure a broadened education in addition to occupational competence.

Good Living Factors

There are 45 major college, public and special libraries, not counting branches, in Oregon to provide information and culture.

The state has 103 modern, well-equipped and well-staffed hospitals, and well over 2,000 practicing physicians. There are also close to 1,300 dentists and 2,263 attorneys.

Contributing materially to the safety of Oregon residents and visitors is the Department of State Police. Posts and stations are maintained throughout the state. Far-flung and 24 in number, they extend from Astoria in the Northwest corner of Oregon to Ontario on the southeast, and from Pendleton in the northeast, to Brookings in the southwest.

Operating from these points day and night, the members on patrol engage in manifold duties ranging in variety from scrutiny of anglers' licenses to rendering first aid to the injured, and in degree from warning an offending motorist to arresting a murderer. Exclusive of those assigned wholly to clerical duties, the personnel thus engaged number 418 when the force is at full strength.

Concerning recreational facilities, Governor Hatfield says: "When you come to Oregon, expect to discover modern travel facilities in an Old West setting. You will find comfortable re-

creation developments on mountains and beside lakes and streams. Scenic playlands connected by fine highways line the Pacific Oregon coast and dot the interior plateau. Oregon's people are friendly and hospitable."

Well distributed over the state are 171 state parks, with a wide variety of climate, scenery and activities. In 1958, for example, more than 10 million persons enjoyed day-time activities in these parks, while 415,184 campers made overnight visits.

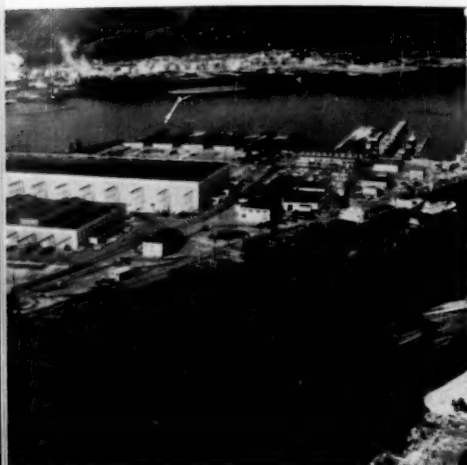
Along the 400-mile Oregon coast line, from the broad mouth of the Columbia River at the busy seaport of Astoria to the state's southern boundary, is an ever-changing seashore. Included are smooth beaches, forested headlands, colorful wildflowers, resort villages and thriving cities.

Among oceanside recreational activities are horseback riding, golfing, hiking, surf and sun bathing, picnicking, bicycling, crab fishing, clam digging, fresh and salt water fishing. Driftwood, seashells and agates are abundant.

In central Oregon you may camp in a park-like pine forest on an open rangelands dotted with juniper and sage. Also in this area snow-capped mountains shelter clear lakes and rushing streams and waterfalls.

The Old West still lives in eastern Oregon where there are rich farmlands, plateau cattle ranches, great irrigation projects, mining and timber industries. Cowboys, Indians, miners and loggers are still much in evidence. An outstanding feature of this area is the Grand Canyon of the Snake River, deepest chasm on the North American continent.

Altogether, whatever you ask for in the way of a vacation or just a weekend of fun, Oregon's varied topography and climate will provide it.



An outstanding example of planned districts in Oregon is Swan Island-Mocks Bottom Industrial Park, managed by the Port of Portland. The park is designed for light manufacturing, distribution warehousing and related activities. It covers 650 acres, of which about 100 acres are ready for occupancy.

The I.D. Team

The central agency in Oregon from which the site seeker can get aid on location problems is the Oregon Department of Planning and Development which has offices in Portland.

The well-trained and experienced staff of the department is armed with a great variety of data on all aspects of industrial development in Oregon and can furnish specific information on any particular area of the state in which you may be interested.

The work of the department gets state-wide support, with several state

I. D. AREA SERIES

The accompanying editorial survey of plant location factors in the State of Oregon was conducted by **INDUSTRIAL DEVELOPMENT** under the auspices of the Oregon Department of Planning and Development. Reprints of this report may be obtained from the Department, State Office Building, Portland 1, Oregon.

business, labor and industrial leaders being active participants in its development programs.

As mentioned earlier, Gerald Frank of Salem is chairman of the Advisory Board of the agency. Other members of the board include George Brown of Portland, AFL-CIO; Ira Keller, of Western Kraft, Albany; C. B. Stephenson, First National Bank, Portland; Tom F. Sandolz, Columbia River Packers Association, Astoria; Ehrman Giustina, Giustina Brothers Lumber Company, Eugene; W. W. Wessinger, Blitz Weinhard, Portland; Lawrence Harvey, Harvey Aluminum Company, The Dalles; Robert Bishop, Pendleton Woolen Mills, Portland; W. Lowell Steen, rancher, Milton-Freewater, and Howard Vollum, Tektronix, Beaverton.

Staff officials are Julius R. Jensen, director; Robert Tarr, deputy director; Charles L. Sauvie, research economist; and Sam Mallicoat, industrial field representative.

Constructive help also is available from the Chamber of Commerce of Portland. The latter, with a population of 405,000, and 837,000 people in its standard metropolitan area, is by far the largest city in Oregon. Active, too,

in helping the site seeker are the many smaller communities scattered over the state. In addition to Portland, there are 39 communities in Oregon with a population of 4,000 or more.

Most of these have good sites available in planned industrial parks, varying in size from just a few acres for light industry to tracts of 100, 200, 350, 700 and on up to 1,900 acres.

Additional special aid on location factors is provided, of course, by the railroads and public utilities listed previously and by major banks in Oregon.

Among the publications available from the Planning and Development Department is a monthly called "CROW with Oregon" which is one of the most newsy and informative of any such publication in the country.

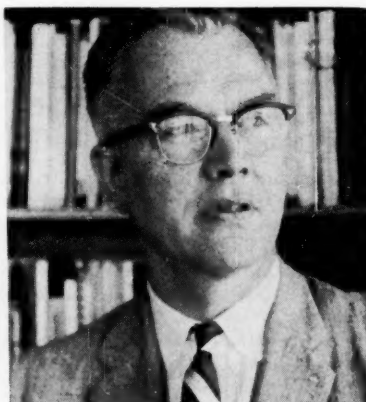
Others are individual folders with summaries of facts about the forestry industry, agricultural industry, power systems and resources, research facilities, water resources and available fuels, transportation, minerals, and a general fact summary folder.

Particularly helpful is a loose-leaf book called "Oregon Fact Summary" which lists the essential characteristics

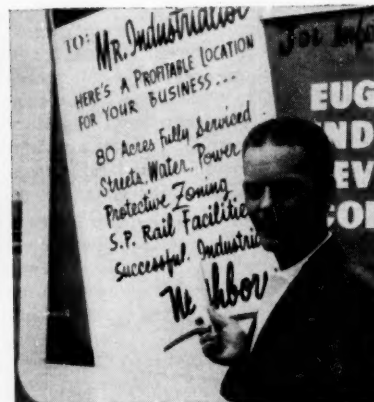
Particularly helpful is a brochure called "Oregon Fact Summary" which lists a variety of useful information about Oregon. Also available are industrial fact sheets for individual communities in Oregon, as well as an up-to-date list of available industrial sites and buildings throughout the state. "Oregon Economic Statistics" is still another informative volume which is available.



Portland Chamber of Commerce official Gene Andrews points with pride to fast-developing industrial areas along the Willamette River. The shot was made from Portland's west hills which command a striking view of the river valley, Portland, and Mount Hood.



Stodious Julius Jensen is the able director of the Oregon Department of Planning and Development. With previous experience in several other key development organizations, he is regarded as one of the top "pro's" in the field.



Fred Brenne proudly presents a planned industrial district which has already attracted important industries to the Mid-Oregon city of Eugene. This is in an area which greatly impressed ID's editor with its attractiveness and general atmosphere of prosperity.

manufacturers record

THE NATIONAL MAGAZINE OF PLANT LOCATION NEWS

EXPANSION BRIEFS

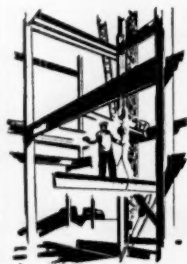
TEMPE, ARIZ. Solid State Electronics Controls Inc., a new subsidiary of Controls Company of America is building a plant on a 10-acre site. Employing about 200 persons, and with an annual payroll of \$3 million, the Controls Company is a leading manufacturer of controls systems for the Aircraft, guided missile, computer, electronic, vending, air condition, automotive, refrigeration, heating and appliance industries. The new building will have an initial floor space of 10,000 square feet and later will be expanded to about 100,000 square feet, and the work force increased to about 500.

EDISON, N. J. Ground has been broken for a new Aluminum Company of America plant here. The facility will be on a 76-acre tract and will occupy some 200,000 square feet. The plant, to be used for die casting, will eventually employ 600 or more workers. The plant is expected to be completed in 1960.

EAGAN, MINN. Ground will be broken for a \$4 million glass manufacturing plant some time next spring for the Brockway Glass Co., Inc. Producing flint (clear) glass containers for use by some of the large industries such as the cosmetics industry, the new facility is expected to provide jobs for about 250 employees.

FAYETTEVILLE, N. C. C. M. Hall Lamp Co. will have a new auto parts plant in operation next June. The \$250,000 plant will produce headlamps and other auto parts. Construction is scheduled to begin around December. Containing 110,000 square feet, it is expected that 200 to 300 persons will be employed.

REGINA, SASK., CANADA. A new warehouse for Western Grocers Ltd. is under construction. The estimated cost of the building including equipment will exceed \$900,000, and is to be located on a 13-acre site. The large one-story structure will comprise a total area of 105,000 square feet.



NEW PLANT SUMMARY

BY DONALD V. QUINN

The following is a summary of major industrial plants reported to INDUSTRIAL DEVELOPMENT during the month of September, 1959, by industries and industrial development organizations in the United States, Canada and territories.

Number of employees is indicated by the code: A (under 25); B (25-100); C (100-250); D (250-1,000); and E (over 1,000).

ALABAMA

Hartselle—Hartselle Manufacturing Co.; Men's work trousers. Under Constr. Est. date of Oper., Jan. 1960. \$114,000. (B)

Phenix City—Phenix Lithographing, Inc.; Ralph Rowe, Mgr. Photography and engraving. Lithographing, color labels. Under Constr. \$140,000. (B)

Samson—Wes-Tex Manufacturing Co.; Pajamas. In Oper. \$110,000. (C)

ALASKA

No plants reported.

ARIZONA

Clarksdale—Zeckendorf Steel Co.; (Subs. of Webb and Knapp, Inc.). William Zeckendorf, Sr., Pres. Building materials from the residue of the slag. Also steel reinforcing rods and merchant mill products will be produced. Plans announced. 1,200-acre site. \$15 million.

Phoenix—Glen-Mar Door Manufacturing Co.; Aram Maridan, Pres. 43rd Ave. Specially designed and fabricated doors. Under Constr. Est. date of Oper., early 1960. 30,000 Sq. Ft. 5-acre site.

Phoenix—Phoenix Plastics; (Branch of Windman Brothers Co.) Murry Windman, Offl. 1423 S. 28th St. All types of plastic products including industrial plastics. Plans announced. \$250,000. (C)

Phoenix—Southwest Lumber Mills, Inc.; J. B. Edens, Pres. 6902 W. Northern. Corrugated board used in making cartons and boxes. Est. date of Oper., Dec. 1959. 15-acre site. \$1 million. 75,000 Sq. Ft. (C)

ARKANSAS

Conway—Customade Products Co.; John L. Wilson, Pres. Automobile license plates and metal stamps. Plans announced. 200,000 Sq. Ft. \$900,000. 5-acre site. (D)

Conway—Universal Match Corp.; Makers of book matches, also candy and cigarette vending machines and commercial laundries. Est. date of Oper., Spring, 1960. \$900,000. 26-acre site. 200,000 Sq. Ft. (D)

Dierks—United States Glass & Chemical Corp.; Barite and gravel. Under Constr. Est. date of Oper., June 1960. \$600,000. (B)

Lewisville—J-P Petroleum Products, Inc.; W. B. Johnson, Pres. Pre-moulded asphalt expansion joints. Est. date of Oper., Jan. 1960. 64-acre site. (B)

CALIFORNIA

Brisbane—The Stanley Works; Crocker Industrial Park. Hardware, hand tools, strip steel. Est. date of Oper., Early 1960. 49,000 Sq. Ft. 4-acre site.

Fresno—Ambler Milling Co.; Chester Ambler, Pres. 340 O Street. Livestock feed supplements and agricultural chemicals. In Oper. \$750,000. 7,500 Sq. Ft. (A)

La Puente—Ajax Hardware Corp.; Norman Louis, Pres. 825 South Ajax Ave. City of Industry. Manufacturers of a complete line of quality builders hardware. Est. date of Oper., Dec. 1959. 9-acre site. 2½-acre building.

La Puente—Michael Flynn Manufacturing Co.; City of Industry. Aluminum extrusion and the fabricating and warehousing of building products. Constr. completed. 20-acre site. 87,000 S. Ft. \$1 million. (C)

Los Angeles—Arwood Precision Casting Corp.; Sycamore St. and Vail Ave. Castings for air frames, fuel injector, electronic and radar systems. Under Constr. 15,000 Sq. Ft.

Los Angeles — Boyle-Midway-American Home Products Corp.; R. S. Covert, V. Pres. 6000 Sheila Street. Household products and insecticides, shoe polishes, etc. Est. date of Oper., 1959. 185,000 Sq. Ft.

Los Angeles—Plastiflex Company; Princeton Dr. Wire reinforced plastic hose for vacuuming and ducting applications. Under Constr. Est. date of Oper., Jan. 1960. 19,000 Sq. Ft. floor space. 30,000 Sq. Ft.-site.

Los Angeles—St. Regis Paper Co.; E. Landell, Plant Mgr. Garfield, and Flotilla. Conversion of Paper to multiwall bags. Under Constr. Est. date of Oper., April, 1960. 110,000 Sq. Ft.

COLORADO

Center—Potato Corporation of America; E. O. Ronshagen, V. Pres. Dehydrated potato flakes. Est. date of Oper., April 1960. (B)

Denver—Public Service Co. of Colorado; 15th & Welton Sts. Headquarters building for utility—serving gas & electricity to Colorado. Under Constr. \$8 million. 250,000 Sq. Ft.

Golden—Boise Cascade Corporation; John Fery, Gen. Mgr. Corrugated shipping containers and corrugated boxes. Est. date of Oper., Spring 1960. (B)

CONNECTICUT

Norwalk—United Aircraft Corp.; Robert A. Aspinwall, Gen. Mgr. Connecticut Turnpike. Engineering-research and manufacturing facility. Plans announced. \$Multi-million. 80-acre site. 350,000 Sq. Ft. (E)

Norwich — American Thermos Products Co.; Warehouse. Under Constr. \$400,000.

Wethersfield—Kahn & Co., Inc.; Wells and Goff Roads. Aircraft and industrial equipment. Under Constr. \$250,000. 20,00 Sq. Ft. 13-acre site. (C)

DELAWARE

Greenwood — Bramble Canning Corp.; Roland A. Bramble, Pres. Canning tomatoes, potatoes, peppers, etc. In Oper. \$250,000. (B)

DISTRICT OF COLUMBIA

No plants reported.

FLORIDA

Daytona Beach—Florida Production Engineering; Ralph Schwarz, Pres. Automation & production line handling equipment. Plans announced. 15,000 Sq. Ft. (B)

De Land—Cole Co.; S. P. Cole, Pres. Citrus juice bases & bottlers' bases. Plans announced. 10,000 Sq. Ft. (B)

De Land—The Tempromatic Corp.; A. D.

NEW PLANTS

Griffith, Plant Offl. Municipal Airport. Air conditioning Equipment. Est. date of Oper., Dec. 1959. (B)

Hollywood—Hawthorne Paper Co.; William Slavin, Offl. Fine papers. In Oper. 20,000 Sq. Ft. (B)

Jacksonville — Florida Oil and Refinery Company; Philip A. Kahle, Jr., V. Pres. Heckscher Drive. Oil refinery—Regular and premium gasoline, butane, propane, kerosene, jet fuel, diesel fuel, gas oil, heating oils, and possibly asphalt. Plans announced. \$10.5 million. (C)

Jacksonville—The Post-Times Co.; Mrs. Pinnel, Offl. Type composition. In Oper. 15,000 Sq. Ft. (B)

Leesburg—Evans Pipe Co.; Thomas J. Evans, Pres. Plastic sewer pipe & other plastic items. Plans announced. 26-acre site.

Miami—American International Aluminum Corp.; R. P. Walker, Offl. Aluminum extrusion & smelting. In Oper. 119,000 Sq. Ft. (D)

Miami—Debu Styles, Inc.; George Saluk, Pres. Ladies dresses. Est. date of Oper., 1959. 4,000 Sq. Ft. (B)

Miami—Miami Heel Corp.; P. T. Gabriel, Offl. Shoe heels. In Oper. 9,000 Sq. Ft. (B)

Miami—Well Built Products, Inc.; Harry Friedson, Pres. Formica Kitchen cabinets. Plans announced. 34,200 Sq. Ft. (B)

Orlando—Central Paper Co.; P. H. Pirkle, Mgr. Paper converting. Est. date of Oper., 1959. 42,000 Sq. Ft. \$160,400. (B)

Orlando—Wilson Plastics Inc.; Oran C. Wilson, Pres. Plastic pipe, lawn systems, etc.; Plans announced. 11,000 Sq. Ft. (B)

Panama City—Glen-Gould, Inc.; J. S. Gould, Plant Offl. 15th Street. Women's Dresses. In Oper. (D)

Port St. Joe—Gulf Coast Garment Mfg. Co.; Mr. & Mrs. Alex LeGrone, Offls. Assembly plant for pre-cut garments. In Oper. (B)

Riviera Beach — Minneapolis-Honeywell Regulator Company; Paul B. Wishart, Pres. Blue Heron Blvd. & Old Dixie Hwy. Manufacturers of automatic control equipment. Advanced research and development of semiconductor products. Plans announced. 40,000 Sq. Ft. 15-acre site.

St. Petersburg—Abilities Inc.; Henry Viscardi, Pres. Parts & Supplies for electronics industries. Est. date of Oper., Oct. 1959. 4,800 Sq. Ft. (B)

Sanford—Pozzoli Inc.; Victor H. Hutchins, Jr., Gen. Mgr. Aggregate & surface mining. In Oper. \$750,000. (C)

Tampa—Holt Manufacturing Co.; H. R. Wiltermood, Gen. Mgr. Floor sanders industrial vacuum cleaners and similar machines. Under Constr. Est. date of Oper., Dec. 1959. 10-acre site. \$Several Hundred thousand. (B)

Tampa—Thatcher Glass Mfg. Co.; 46th St. Glass containers. Under Constr. Est. date of Oper., early 1960. 30-acre site. \$3.5 million. (D)

GEORGIA

Atlanta—Parr Manufacturing Co.; Furniture. In Oper. \$100,000. (B)

Blue Ridge—Levi Strauss & Co.; Trousers. Plans announced. 50,000 Sq. Ft. (C)

Commerce—Blue Bell, Inc.; Jackets. In Oper. 65,000 Sq. Ft.

Lyerly—Georgie Rug Mill. Textile products. In Oper. \$450,000.

HAWAII

No plants reported.

IDAHO

Rupert—Rocky Mountain Chemical Corp.; L. M. Buhler, Pres. Potato alcohol processing.

NEW PLANTS

Est. date of Oper., Dec. 1959. \$250,000. (B)
Weiser—I. B. Perch Company; Irvin B. Perch, Off. Trailer manufacturing. Est. date of Oper., March, 1960. (B)

ILLINOIS

Flora—Sparton Corp.; U. S. Route 50. Military, automotive and railway electrical equip. Est. date of Oper., December 1959. 21-acre site. 60,000 Sq. Ft.

West Chicago—Western Electric; Electronic communications equipment. Plans announced. \$7.5 million. 140-acre site. (E)

INDIANA

No plants reported.

IOWA

Belle Plaine—American Agriculture Chemical Co.; Charles M. Powell, Pres. Fertilizer. Est. date of Oper., late 1960. \$1 million. 72.25-acre site. (B)

KANSAS

Hutchinson—R. L. Polk & Co.; Book publishing. Est. date of Oper., 1960. \$250,000. (C)

Manhattan—R. L. Polk & Co.; Book publishing. Est. date of Oper., 1960. (B)

Olathe—Producers, Inc.; F. E. Traylor, Pres. Under Constr. \$10 million. 1,320,000 Sq. Ft.

KENTUCKY

Brandenburg—Olin Mathieson Chemical Corp.; Ethylene dichloride, oxides and glycerin. Plans announced. \$20,000,000. (D)

Winchester—Loma Manufacturing Co.; Ray Crews, V. Pres. & Gen. Mgr. Fifth and Main Streets. Blouses and dresses. In Oper. \$100,000. (C)

LOUISIANA

Baton Rouge—Ethyl Corp.; B. B. Turner, Pres. P. O. Box 341. Antinock compounds including vinyl chloride monomer. Under Constr. \$290,000. (A)

Gretna—Timcoat Corp.; Rubberized asphalt mastic for marine pipe line weight coating. Plans announced. \$1,473,879. (B)

Jeanerette—Central Louisiana Electric Co.; Natural gasoline, butane, and propane. Under Constr. Est. date of Oper., Nov. 1959. \$260,000. (B)

Many—Mathews Lumber Co.; Pine and hardwood lumber. Under Constr. Est. date of Oper., Nov. 1959. \$117,360. (B)

Minden—Arizona Chemical Co.; Tall oil rosins, fatty acids. Under Constr. \$4,650,000. (B)

Minden—Feazel & Anderson; Propane, butane. In Oper. \$1,090,000. (A)

Plaquemine—Dow Chemical Co.; L. I. Doan, Pres. Ethylene and propylene. Under Constr. \$2.5 million.

Plaquemine—Dow Chemical Co.; L. I. Doan, Pres. Polyethylene pellets. Under Constr. \$8.4 million. (C)

Westlake—Continental Oil Co.; L. F. McCollom, Pres. Straight-chain primary alcohols. Under Constr. \$10,715,000. (C)

MAINE

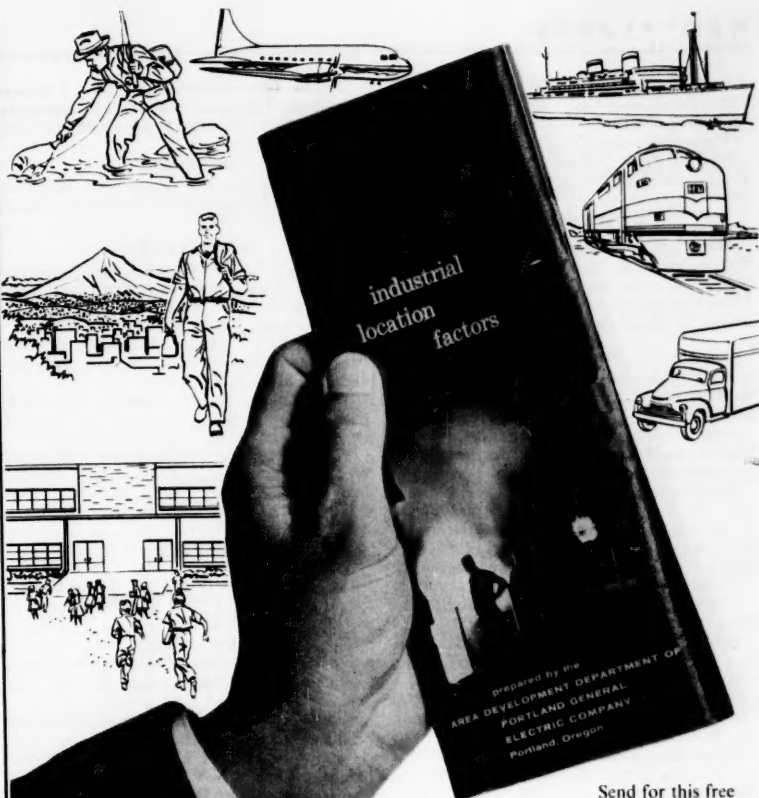
No plants reported.

MARYLAND

Baltimore—Carling Brewing Co.; Ian R. Dowie, Pres. Beer and Ale. Under Constr. Est. date of Oper., Spring 1961. 40-acre site. \$16 million. 500,000 Sq. Ft. (D)

Baltimore—Hedwin Corporation; Thomas W. Winstead, Pres. 1600 Roland Heights Ave. Vinyl and laminated placemats and other plastic consumer products and industrial containers. In Oper. 10,000 Sq. Ft.

Baltimore—Western Electric Company; Harvard C. Townsend, Mgr. Broening Hwy.



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NEW PLANTS

Telephone equipment. Est. date of Constr. 1960. Est. date of Oper. 1961. 150,000 Sq. Ft. \$1.5 million. (D)

Timonium—Head Ski Company, Inc.; Howard Head, Pres. 15 West Aylesbury Rd. Metal and plastic skis. In Oper. 24,000 Sq. Ft. 6-acre site.

MASSACHUSETTS

Worcester—Westinghouse Electric Corp.; Robert M. Scott, Mgr. Brooks and Rockdale Streets. Heavy duty electrical equipment. Plans announced. 31,590 Sq. Ft. of Land. 12,000 Sq. Ft. of floor space.

MICHIGAN

Ann Arbor—Edward Bros. Inc.; Joseph Edwards, Pres. Lithographing. Under Constr. \$120,000. (C)

Augres—Jackson & Church Co.; Howard Beck, Pres. Machinery of various types. Under construction. \$300,000. (D)

Berrien Springs—Correction; Welco Products Co., Inc.; Electrical wiring assemblies for appliances and automotive industries. Under Constr. Est. date of Oper., July 1959. (C) This was reported in our August issue under "Herrien Springs, Indiana."

Centerline—H. B. Stubs, Co.; H. B. Stubs, Pres. Displays. Under Constr. \$115,000. (B)

Detroit—Detroit Engineering & Machine Co.; Joe & Andy Kalman, (In Charge) Tools, dies, etc. Under Constr. \$112,000 (D)

Detroit—Stone Container Corp.; F. P. Pond, Jr., Pres. Corrugated shipping containers. In Oper. \$400,000. (B)

Dollar Bay—Great Lakes Boats, Inc.; Outboard motor boats. Plans announced. \$100,000. (B)

MINNESOTA

Barnesville—Gateway Flakes, Inc.; Potato flakes. Est. date of Oper., Oct. 1959. \$400,000. (B)

Golden Valley—Forman, Ford and Co.; Lee A. Potter, Sr., Chairman of the board. County Rd. #18. Paints and protective coatings. Est. date of Constr. Nov. 1959. \$350,000. 58,000 Sq. Ft. 7-acre site.

Mora—Minnesota Plastics Co.; Plastic products. Plans announced. \$250,000. (B)

St. Cloud—Waldorf Paper Products Co.; Corrugated paper containers. Est. date of Oper., Feb. 1960. \$500,000.

Waconia—Waconia Manufacturing Industries, Inc.; Sheet metal fabrication. Est. date of Oper., Dec. 1959. (B)

MISSISSIPPI

Booneville—Booneville Furniture Co.; B. L. Haley, Pres. Sectional couches, livingroom suites and sofa beds. In Oper. (C)

Lucedale—Lucedale Manufacturing Company, Inc.; Apparel. In Oper. \$200,000. (C)

Pascagoula—H. K. Porter Company, Inc.; James P. Raugh, V. Pres. Basic refractory bricks used in the steel, cement and glass industries. In Oper. \$12 million.

Picayune—Pearl Veneer Co.; Veneer. In Oper. \$200,000. (B)

Quitman—Quitman Knitting Mills, Inc.; Apparel. In Oper. \$250,000. (C)

Rienzi—Sally Marks, Ltd.; William Marks, Owner. Ladies and childrens wear. In Oper. (D)

Starkville—Panocular Corp.; Hwy 12. Metal & Woodworking precision instruments. Est. date of Oper., early 1960. \$300,000. (C)

Tupelo—Phillips-Foscue, Corp.; Eric Johnson, Mgr. Foam rubber and distribute supplies for the furniture industry. In Oper. 15,000 Sq. Ft. (B)

Yazoo City—Mississippi Clay Products Company; Vicksburg Hwy. Bricks and other clay products. Under Constr. \$800,000. 230-acre tract. (B)

MISSOURI

Ava—Rawlings Sporting Goods Manufacturing Co.; Sporting goods. Plans announced. 56,000 Sq. Ft. (D)

MONTANA

Anaconda—Webb and Knapp Strategic Corp.; William Zeckendorf, Pres. Steel reinforcing rods, wire, nails, and fencing. Est. date of Oper., Jan. 1964. \$20 million.

Butte—Butte Brags Co.; Tim J. Sullivan, Pres. Gas controls, valves, fittings. Plans announced. \$1 million. (B)

Missoula—Vancouver Plywood Co.; William C. Smith, Supt. Plywood. Est. date of Oper., May 1960. \$2.5 million. (C)

Polson—Cascade Plywood Corp.; Charles W. Fox, Pres. Plywood. In Oper. \$1.5 million.

NEBRASKA

No plants reported.

NEVADA

No plants reported.

NEW HAMPSHIRE

No plants reported.

NEW JERSEY

Burlington—Phoenix Steel Corp.; Oxygen steelmaking mill. Plans announced. \$40 million. 850-acre site.

Camden—General Electric Co.; Electrical Products. Under Constr. \$400,000. (B)

Edison—Aluminum Company of America (Alcoa); Charles G. Wistar, Works Mgr. Die casting. Est. date of Oper., late 1960. 200,000 Sq. Ft. 76-acre site. (D)

Gibbstown—Chemtron Corporation (Cardox Division); Roy T. Omundson, Dev. Pres. Liquid and solid carbon dioxide produced from ammonia. Distributed in liquid and dry ice forms to various industries including beverage, food, transportation, foundry, rubber, paint, metals, aviation, welding and fire protection. Largest facility in the Northeast and one of the largest in the U. S. Under Constr.

Holmdel—Bendix Aviation Corp.; Dr. Wallace C. Caldwell, Mgr. Engineering and research laboratory. Semiconductor products. Germanium high- and medium-power transistors, silicon transistors, silicon power rectifiers, diffused-alloy-power transistors, computer transistors, controlled rectifiers, and other four-layer diodes. Under Constr. 118-acre site. 72,000 Sq. Ft.

NEW MEXICO

Deming—Auburn Rubber Co.; Plastic and rubber toys. Est. date of Oper., Jan. 1960. \$4½-million.

Neuman—Border Steel Rolling Mill; Milton D. Fienberg, Chmn. Steel from scrap. Est. date of Oper., Jan. 1960. \$500,000.

NEW YORK

Cheektowaga—F. N. Burt Co., Inc.; Boxes and folding cartons. In Oper. \$5 million. (D)

DeWitt—Chrysler Corp.; A. T. Hanson, Div. Mgr. N. Y. State Thruway. Manual transmissions and rear axle assemblies for cars and trucks. Plans announced. 400,000 Sq. Ft. 125-acre site. (E)

North Tonawanda—Seaway Steel Co.; Hot rolled wire rods etc. In Oper. (B)

Plainview—Fiat Metal Mfg. Co., Inc.; Prefabricated shower cabinets, glass doors. In Oper. \$450,000. (B)

Watertown—American Process Corp.; Fractional horsepower electric motors for portable

tools and appliances. Est. date of Oper., Oct. 1959. Under Constr. 7-acre site. 41,000 Sq. Ft.

NORTH CAROLINA

Asheville—Leigh Industries, Inc.; Highway 74. Fabricate metal building products. Under Constr. Est. date of Oper., early 1960. \$500,000. 105,000 Sq. Ft.

Charlotte—Ramsey Products Co., Robert McArthur, Pres. 724 Cesco St. Power transmission (Silent chain drives) for textile mills and other industries. Under Constr. (C)

East Rockingham—Rockingham Mills, Inc.; Weaving and dyeing. Est. date of Oper., beginning 1960. (C)

High Point—Hatteras Yacht Co.; Willis Slane, Jr., Plant Offl. Fibre-Glass motor yachts. Est. date of Oper., Nov. 1959. \$250,000. (C)

Maxton—Troy Industries, Inc.; F. L. Taylor, Pres. House Trailers. In Oper. (C)

Raleigh—Aeronautical Electronics, Inc.; Charles R. Browning, Pres. U. S. 1. Communication Equipment. Under Constr. \$180,000. 25,000 Sq. Ft. (C)

Sanford—Federal Spinning Corp.; Carroll Little, V. Pres. & Gen. Mgr. Under Constr. \$400,000. 53,000 Sq. Ft. (C)

Wilmington—Hartol Petroleum Corp.; W. Charles Burns, Pres. Oil terminal. Plans announced. \$2 million.

Wilmington—Reasor Chemical Corp.; Owen Eckhardt, Works Mgr. Extract wood rosin, turpentine and pine oil. Under Constr. \$1.5 million. (C)

NORTH DAKOTA

No Plants Reported.

OHIO

Cleveland—Air Products, Inc.; Jennings Road. Oxygen Plant. Est. date of Oper., 1960. \$10 million.

Columbus—Ben-Tom Supply Co.; 1237 Dublin. Warehouse to distribute reinforced concrete pipes and other building supplies. Est. date of Oper., End. 1959. 12,000 Sq. Ft.

Columbus—Highlights for Children, Inc.; Garry Myers, Pres. 37 E. Long St. Publishing house. Est. date of Oper., Beginning 1960. 12,000 Sq. Ft.

Toledo—Finkbeiner, Pettis, & Strout; 2130 Madison. Sewage treatment plant. Plans announced. \$300,000.

Wickliffe—Lubrizol Corp.; 29400 Lakeland Blvd. Chemicals and chemical products. Est. date of Oper., Late 1959. 52,000 Sq. Ft.

OKLAHOMA

El Reno—Peerless Products Co.; Aluminum Fabrication. Est. date of Oper., Nov. 1959. (B)

Okemah—Mission Multiple Vitamin Co.; Packing, shipping and distributing of vitamins to civic fraternal and charitable organizations for fund-raising campaigns. In Oper. (B)

OREGON

Albany—Wood Fiber Co.; William Swindells, Sr., Pres. Hwy 99. Particle board. Particle selection by air flotation to form the mat from which the board will be pressed. Used for floor underlaying, cabinet work and furniture mfg. Est. date of Oper., April 1960. 60,000 Sq. Ft. 15-acre site. \$1.5 million. (B)

Portland—Conrad Veneers, Inc.; S.W. Childs Rd. Veneer. Under Constr. \$134,000. 26,000 Sq. Ft. (A)

Portland—Pacific Carbide & Alloys Co.; Vinyl acetate monomer, used in the production of plastics, adhesives, paints and synthetic fabrics. Under Constr. \$500,000.

Springfield—Georgia-Pacific Corp.; Robert

B. Pamplin, Pres. Plywood. Under Constr. Est. date of Oper., 1960. 10,000,000 Sq. Ft. (C)

PENNSYLVANIA

Broomall—Curtis 1000, Inc.; Abbotts Dr. & Sussex Blvd. Envelopes. Plans announced. 35,000 Sq. Ft. 3-acre site.

Export—The Parallite Mfg. Co.; Albert H. Lasday, Pres. Glass fiber-reinforced plastics. Under Constr. 7,500 Sq. Ft. \$250,000. (A)

Hazleton—Utrilon Corp.; Plastic shoes. Plans announced. 72,000 Sq. Ft. \$500,000.

McAdoo—Lone Star Boat Co.; D. O. Tomlin, Pres. Fiberglass outboard boats. Under Constr. Est. date of Oper., Spring 1960. \$1.5 million. 150,000 Sq. Ft. 40-acre site.

Merwin—Aluminum Co. of America (ALCOA); Research and development center. Constr. within a year. Est. date of Oper., 1961. \$30 million. 2,400-acre site.

Muhlberg—Western Electric Transistors and other electronic devices used in military missiles, communications and space programs. Est. date of Oper., Spring, 1960. \$2 million. (E)

PUERTO RICO

No Plants reported.

RHODE ISLAND

Providence—Clifford Metal Sales Co.; Corliss Street. Wholesale Metals. Est. date of Oper., Mid-1960. \$350,000. 35,000 Sq. Ft.

Providence—Mack Trucks, Inc.; Corliss Street. Truck sales and service. Est. date of Oper., Mid-1960. 19,600 Sq. Ft. \$250,000.

SOUTH CAROLINA

Catawba—Bowaters Carolina Corp.; Sir Eric Bowaters, Pres. Paper mill. Est. date of Oper., 1962 or 1963. \$25-35 million. (C)

SOUTH DAKOTA

Lennox—Nutrena Mills, Inc.; Walter Brigger, Mgr. Feeds. In Oper. \$250,000. (A)

TENNESSEE

Chattanooga—Glaco Chattanooga Co.; Jack McKinnon, Mgr. 1001 Crutchfield Ave. Processing of baking pans. In Oper. (B)

Clarksville—Quality Products Co.; Highway 79. Component parts for air-conditioning equipment. Plans announced. 10-acre site. (B)

Crossville—Roselon Yarns, Inc.; Roselon, A. G. Adams, Pres. Banlon Yarn. Plans announced. 34,000 Sq. Ft. \$1 million. (D)

Elgin—American Frame Mfg. Co.; Wood pallets and appliance bases. In Oper. (B)

Erwin—Superior Hone Co.; Honing machines, hones and mandrels for industrial use. Plans announced. 15,000 Sq. Ft. \$150,000. (B)

Estill Springs—Dream Industries, Inc.; E. F. Griswold, Plant Mgr. Coin-operated mechanical horses made of molded fiberglass with self-contained electrical-mechanical units for activation. Produced for the vending machine trade. In Oper. 7,000 Sq. Ft. (B)

Humboldt—Daniels Standards Corp.; Street lighting standards and accessories such as highway signs, traffic controls, supports for the signs and controls, and some construction equipment. Under Constr. 40,000 Sq. Ft. \$125,000. (C)

Jackson—Beare Co.; Robert L. Beare, Jr., Pres. Bells Hwy. Food processing and cold storage. Plans announced. 500-acre site. 80,000 Sq. Ft. \$1 million.

Johnson City—Tennessee Plastics, Inc.; Electric heating equipment. Under Constr. 40,000 Sq. Ft. (C)

TEXAS

Beaumont—E. I. duPont de Nemours and Company, Inc.; Acrylonitrile—used in the manufacture of acrylic fiber. (Orlon) Under Constr. Est. date of Oper., Spring 1961. (D)

Brownsville—Union Carbide Corp.; Morse Dial, Chairman of the board. A wide variety of chemical solvents and intermediates for the textile, pharmaceutical and surface-coating industries. Est. date of Constr., April, 1960. Est. date of Oper., March 1961. (C)

Houston—Duncan Coffee Co.; C. W. Duncan, Jr., Pres. Katy Rd. Producing and roasting coffee. Est. date of Oper., late fall, 1960. \$3 million.

McKinney—Ero Manufacturing Co.; Howard F. Leopold, Pres. Highways 75 and 24. Auto seat covers, convertible tops, artic-type underwear, hassocks, metal bridge tables and chairs, life jackets and floating boat cushions, exercise rowing machines, life belts for water skiers, and exercise bar-bells. Under Constr. Est. date of Oper., Jan. 1960. 100,000 Sq. Ft. \$400,000. (C)

Palestine—Texize Chemicals, Inc.; W. J. Greer, Pres. Cleaning and maintenance products for home and industry. In Oper. 60,000 Sq. Ft. \$1 million. 14-acre site.

UTAH

No Plants reported.

VERMONT

No Plants reported.

VIRGINIA

Crewe—Boston Concrete Products Co., Inc.; W. E. Roland, Mgr. Concrete products. Cinder Block, concrete block and solite block. Est. date of Oper., Oct. 1959. 4.26-acre site. \$250,000. (A)

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Cross Ties

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Docks for Ocean Vessels



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Louisville, Miss.; Jackson, Tenn.



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KINNEAR Steel Rolling Grilles—the protective openwork of steel bars and links with coiling upward action. Admits light, air, and vision when closed—but blocks all intruders.

KINNEAR Motor Operators—Special, rugged, heavy-duty motors that add time-saving push-button control to the many other advantages of upward-acting doors.

KINNEAR Bifold Doors—Heavy-duty service doors of wood or all-steel. Center-hinged to fold upward with easy jack-knife action.

KINNEAR Rol-Top Doors—Sectional doors (wood or all-steel) available paneled for glass in any number of sections.

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Note size of
man in relation
to this door

Another unusual installation of

KINNEAR Rolling Doors

In 60 years of making metal rolling doors for industrial and commercial openings of every kind, we believe these are the largest ever made of aluminum.

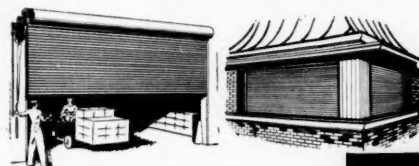
Two doors 48 ft. wide and 39 ft. high enclose opposite ends of this 300-ton traveling gantry crane at the Robert H. Saunders — St. Lawrence generating station of the Hydro Electric Power Commission of Ontario. Similar Kinnear doors are used in New York's Robert H. Moses Power Plant, also part of the St. Lawrence project.

The doors are opened electrically as the crane is positioned over one of

several open hatches in the generating station . . . then closed to permit working inside in any weather.

The space-saving efficiency and all-metal protection of Kinnear Rolling Doors cut costs in all kinds of openings — from counter-top areas to large industrial service doorways, as shown in the sketches below.

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Kinnear Rolling Doors are built any size, of steel, aluminum or other metals. Motor operation, with push-button control, if desired. Write for full details.

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William Beury . . . 1943-1955
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MANUFACTURERS RECORD

(IN REVIEW)



NOVEMBER 1885

(AS ABSTRACTED MORE THAN 70 YEARS LATER)

BALTIMORE, MD.

NEW SOLDERING IRON

It seems strange that never before has there been a successful improvement made on a tool so extensively used and so primitive in its style of manufacture as the tinner's or plumbers' soldering iron. A radical and most valuable change has been made, however, and is accomplished successfully by a simple but very ingenious patented invention under which large quantities are being manufactured and sold.

Already many heavy manufacturers of the old style are handling this new improved iron, and it is being sold extensively generally throughout the United States, and there is also a large and growing demand coming from foreign countries.

Incidentally we learn that the inventor, Mr. J. C. Covert, of West Troy, N. Y., is about to form a stock company with a view to manufacture the irons on an extensive scale. The proposed location of these works has not been as yet positively decided upon. Mr. Covert has some very flattering inducements to locate the company and works in a Western city. This we believe would be advisable, and also that no better location could be selected for the proposed works than St. Louis, both on account of our location in the heart of the great Western market and of our many other advantages as a manufacturing point. It would certainly be of advantage to St. Louis could she add this to her many other manufacturing industries.

Mr. J. C. Covert is a man of sterling business qualifications and largely engaged in manufacturing interests, being a member of the firm of E. & J. C. Covert, of Farmers Village, N. Y., who are known as the largest neck yoke manufacturers in the world; and also of the well-known Covert Manufacturing Company, of West Troy, N. Y., whose goods are standard both in this and foreign countries. Besides these Mr. Covert is so well-known as a successful inventor and manufacturer that success in this enterprise is assured. In fact the new iron has already secured a large and paying demand, to meet which a new manufactory is required.

NEW ROLLER SKATE

The new skate . . . is the latest and most important improvement in roller skates made by the celebrated manufacturer M. C. Henley, of Richmond, Ind. The Monarch skate is the result of years of practical experience in the manufacture and use of roller skates, and combining as it does all the valuable improvements attached to the popular Challenge skate, together with the new boxed rubber hanger and large headed screw, it is one of the most desirable and complete skates placed on the market. Mr. Henley claims absolute superiority over all others for the goods he manufactures, and urges in support of his claim and proof of his statements the unparalleled demand for his skates, and their universal adoption everywhere.

The Monarch Spring Steel Club Skate for both ladies and gentlemen is not only recommended for its utility, but for its elegance and beauty of design and finish. The Henley skate took the highest awards at the New Orleans World's Exposition 1885, also at Cincinnati Industrial Exposition in 1884.

It may be of interest to state in this connection that the Henley factory, at Richmond, Ind., is a mammoth concern, and is claimed to be by far the largest roller skate factory in the world. The main building is 250 x 50 feet, brick, four and one-half stories in height, with a slate roof, and contains about 2 acres of floor, laid out so as to utilize to the best advantage each square foot, and to facilitate the rapid handling of goods and convenience of workmen. About 200 hands are employed. The machinery is new and of latest improved manufacture, and is capable of enabling the workmen to turn out 2,000 pairs of rink skates and 500 pairs of club skates daily. The establishment embraces one of the finest nickel-plating departments in the country. Mr. Henley also manufactures and furnishes complete skate supplies and equipments for skating rinks. Any information as to goods manufactured may be obtained from M. C. Henley, Richmond, Ind.

BUSINESS AT WORCESTER

The business situation at Worcester, Mass., one of the principal iron towns of New Eng-

land, is much better than a year ago. The loom works are particularly active, L. J. Knowles & Brother, for example, reporting that they are obliged to run evenings to keep up with their orders. A great many woolen mills are renewing their machinery, and some are building additions in order to be ready to make the most of the anticipated general trade revival. The outlook at the steel works and the wire works is also more favorable. With the ordinary machine shops the gain is less pronounced. Treasurer Chase, of the Worcester County Institution for Savings, notes some degree of prosperity among the working classes. During the last period of good business many mechanics built houses for themselves, and something is thought likely to be done in the same line next year.

AN ENTERPRISING TOWN

DICKSON, TENN. There is a regular organization of citizens at this place whose object is to induce manufacturers to locate here. It has been organized but a few weeks, and has already secured a planing mill from Hickman, Ky., and have the promise of other manufacturers. Are corresponding with a Paducah tobacco firm to locate here. This is a good tobacco section, and the farmers will grow it if a market is established here. This is a splendid opening for a tobacco house. Town is growing fast, 1,000 inhabitants, two railroads.

WARMING AND VENTILATION.

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→*24 SIZES*←

Low Pressure Generators

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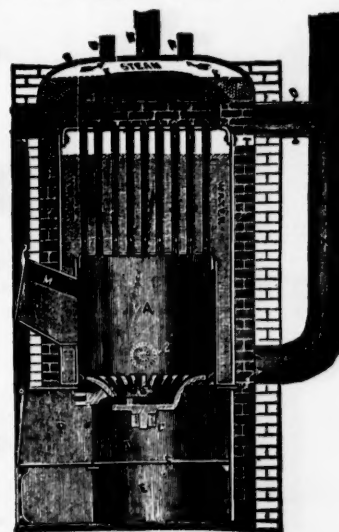
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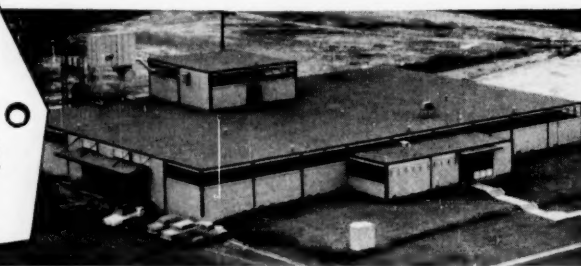


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Here are three manufacturing plants recently constructed in Georgia for national concerns. As you see, their costs are far below those prevailing elsewhere for comparable structures. This is just one of many reasons why so many progressive firms are locating in Georgia, heartland of the expanding southeastern market.

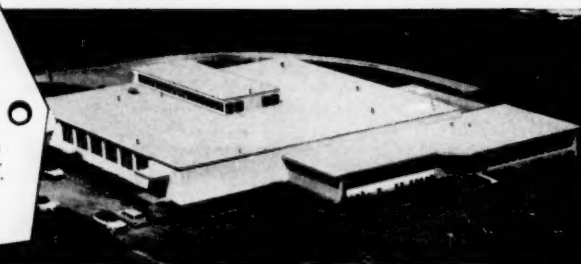
\$4.87
Per Sq. Ft.

26,600 sq. ft. Steel and masonry construction. Ceiling height 13'4". Air conditioned office. 100% sprinklered. Locally financed.



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Per Sq. Ft.

26,700 sq. ft. Office area of 5305 sq. ft. has paneled walls; terrazzo and carpet floors; air conditioning. Plant 100% sprinklered. Locally financed.



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106,500 sq. ft. Steel and masonry construction. Ceiling height 15'. Office air conditioned. 100% sprinklered. 12,200 sq. ft. paved area.



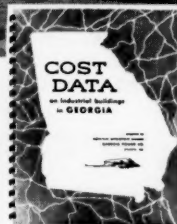
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GEORGIA POWER COMPANY
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NEW PLANTS

Grotoes—Reynolds Metals Company; Richard M. Chamberlin, Mgr. Polyvinyl chloride and polyvinyl alcohol films, used to vacuum-mold aircraft parts, to bag-mold reinforced plastics, for both food and non-food packaging, for flesh-colored bandage tape, for garment bags, and children's kites. Also a weatherable film that can be used in greenhouses in place of glass. In Oper. 124,000 Sq. Ft. 63-acre site. (C)

Hopewell—Firestone Tire and Rubber Co.; Nylon tire cord. Est. date of Oper., 1960. (D)

Richmond—Philip Morris Inc.; Joseph F. Cullman, Pres. Cigarette and tobacco research and development center.

WASHINGTON

Bellingham—Bellingham Cold Storage Co.; Cold storage facilities. Est. date of Oper., May 1960. \$700,000.

Chewelah—Lane Mt. Silica Co.; Silica. In Oper. (Also Under Constr.) Est. date of Full Oper., 1960. \$250,000.

Seattle—Volkswagen Washington, Inc.; Distribution center. Under Constr. \$250,000.

WEST VIRGINIA

Neal—Novamont Corp.; Lucio Lucini, Pres. (U.S. Subs. of Montecatini Chemical Co.) Moplen, a petrochemical plastic in powder form. Est. date of Constr. Nov. 1959. \$10 million.

WISCONSIN

Berlin—David White Instrument Co.; William Balch, Pres. Scientific Instruments. Est. date of Oper., March 1960. \$225,000. (B)

Glendale—Red Star Yeast & Products Co.; Russell D. L. Wirth, Pres. Yeast, etc. Research and development center. Est. date of Constr., 1960. Est. date of Oper., 1961. 7-acre site. \$1 million. 40,000 Sq. Ft.

Mauston—Lectro-Vac Inc.; Robert Lawton, Sec'y. Metal Vapor plating. Est. date of Oper., Jan. 1960. (B)

New London—Barn-O-Matic; Gordon Carrew, Pres. Barn cleaners. Est. date of Oper., Dec. 1959. (B)

North Hudson—Torlew Corp.; Carroll Lewis, Chairman of the board. Cabin cruisers. Plans announced. (B)

Oak Creek—A.C. Spark Plug; L. W. Tobin, Jr., Mgr. Missile guidance work. Est. date of Oper., End, 1960. \$5 million. (E)

Viroqua—Art Marble Co.; Philip Baschak, Offl. Highway 14. Furniture. Dining tables, coffee tables, card and game tables of various types and designs with a material made of crushed marble, hand placed in a free-form geometric design. In Oper. 36,000 Sq. Ft.

WYOMING

No Plants reported.

CANADA

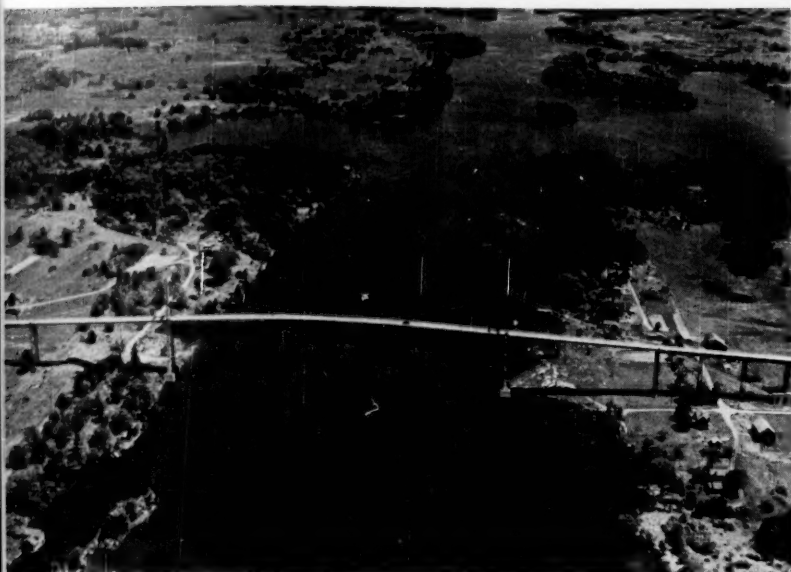
(Due to space limitations, Canadian and foreign listings are being carried over to next month.)

UPSTATE NEW YORK



**ST. LAWRENCE
VALLEY**





With the American span of the Thousand Islands Bridge in the foreground, this is the main channel of the St. Lawrence River—part of the great new Seaway that has resulted literally in opening up a new frontier of development opportunity for communities throughout the St. Lawrence Valley area.

A NEW

LET'S say you plan to locate a new plant to serve major markets in the northeast. Water and power are vital site selection factors. Moreover, you want to find a scenic spot with outstanding recreational attractions. Finally, you'd like to locate in an area that is not congested—where the big growth is yet to come.

Impossible? Not at all. There is such a spot—the St. Lawrence Valley in Upstate New York.

Paradoxically, this is an area which in itself has received little direct attention, despite the international coverage heaped upon the St. Lawrence Seaway project. Oddly enough, most of the publicity has pinpointed the dams and locks while ignoring the communities which lie within their shadows.

So, it's timely to take a good look at the St. Lawrence Valley, including not only the Seaway, but also the communities and their development programs. Certainly there are many new opportunities in this area which are of interest to growth minded firms.

Dr. Sidney C. Surfrin, a prominent Syracuse University economist cur-

rently assaying the Valley area for its development potential, said recently in a preliminary report of his findings:

"A new frontier has come into being in the United States—the St. Lawrence Valley of Northern New York. This industrial and commercial frontier is equipped with roads, railroads, electric power at competitive rates, has access to the markets and ports of the Atlantic Ocean and Great Lakes via the new Seaway, a population of about 200,000, a skilled and productive labor force, newspapers, radio, television, vacation, and recreation places, schools and colleges, hospitals, indeed, all the amenities of modern life.

"The area is a frontier in the sense that it is beginning to expand industrially and commercially, and its potential for growth is being recognized after nearly 100 years of economic quiescence. The spark which triggered the new development was the billion dollar St. Lawrence Seaway and the Barnhart Island Power project."

The completed power project to which Dr. Surfrin refers will make available to the United States and Canada

over one and a half million kilowatts of electric power. Of the amount reserved for use in the U.S., Niagara Mohawk Power Corporation—which supplies electric power to 22,000 square miles of Upstate New York—has contracted for 115,000 kilowatts of firm power, plus additional power not required by other customers.

For all practical purposes electric power for industrial use is unlimited with St. Lawrence power now available. The Niagara Mohawk system ties in directly with switching stations of the New York Power Authority stemming from power dams along the International Rapids section of the St. Lawrence.

Principal structures of the power project are the Robert H. Saunders-St. Lawrence Generating Station of Canada and the Robert Moses Power dam in the United States—adjoining powerhouses, the Long Sault (pronounced *Soo*) Dam and Iroquois Dam in Canada as well as thousands of feet of dikes.

The power dams merge at the international boundary between the eastern

FRONTIER IN THE EAST

Largely overlooked in all the publicity attending the opening of the Seaway has been the St. Lawrence Valley itself. In addition to being a popular choice for vacations, this same area now looms as a logical location for a variety of enterprises.

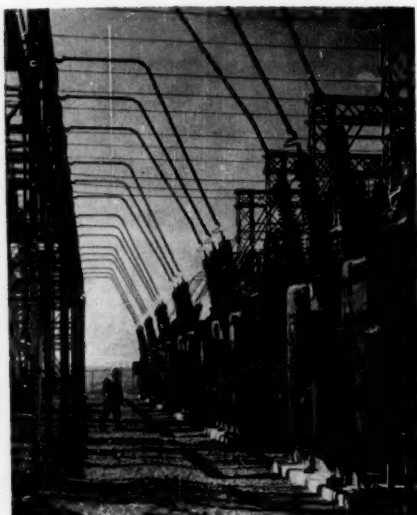
end of Barnhart Island and the Canadian shore near both Cornwall, Ontario on the Canadian side and Massena, New York on the United States side. They have a maximum height of 162 feet above foundation with an overall length of 3,300 feet.

But that's not all. A concrete indication of Niagara Mohawk's faith in the future of the St. Lawrence Valley lies in the fact that this utility has invested more than \$3,500,000 this year for additional new facilities in the Valley. Also, Niagara Mohawk has spent hundreds of thousands of dollars for expansion and improvement of existing electric and natural gas facilities in the Valley.

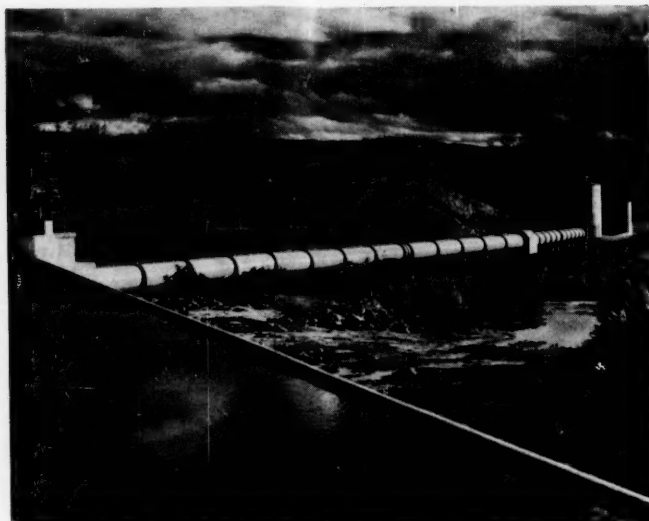
Among the principal electric substations either completed or planned for construction this year are those at Watertown, Lowville, Gouverneur, the Hamlets of Hannawa, Glenfield and Nicholville, the Villages of Sackets Harbor and Deferiet and the Towns of Norfolk, Fine and Bombay. New natural gas lines have been built this year from Ellisburg to Watertown and



Syracuse Economist Dr. Sidney C. Sufrin points with pride to a map of the St. Lawrence Valley area which he describes as one that "is beginning to expand industrially and commercially, and its potential for growth is being recognized after nearly 100 years of economic quiescence."



The Porter Substation of Niagara Mohawk Power Corporation is one of the many installations that the company has to distribute St. Lawrence electric power throughout the project's marketing area.



The South Colton Hydroelectric Generating Station, a portion of which is shown here, comprises along with four other generating plants and six man-made lakes, a \$33 million Niagara Mohawk Power Corporation project on Raquette River.

in the Hamlets of Belleville, Pierrepont Manor and in the Village of Mannsville.

Niagara Mohawk also has extensive plans for the installation of natural gas lines from Watertown north to Massena. This project, which would make natural gas available to Ogdensburg and the Town of Massena, is subject to the approval of public authorities. Service to other Northern New York communities would be extended as the requirements for natural gas increase.

Niagara Mohawk has applied to the New York State Public Service Commission for approval of natural gas franchises granted to the company by three towns in Jefferson County and 10 towns in St. Lawrence County.

The application includes the Jefferson County towns of LeRay, Antwerp and Philadelphia and the St. Lawrence towns of Rossie, Gouverneur, DeKalb, DePeyster, Oswegatchie, Lisbon, Waddington, Louisville, Massena and Norfolk. The PSC is now considering the application.

What is the effect of all this rapid development on the economy of the area?

Frank Augsbury, Jr., of Ogdensburg, owner of cargo vessels and head of both a United States and Canadian firm looks at it this way:

"Now that we have experienced the actual building of the Power and Seaway Developments, we can expect to have a lessening of actual payroll in this area, since industry and the tourist business will be unable to take up the

slack caused by the finishing of the actual construction work. Naturally, that will call for some slight economic lessening of dollars being spent in the area. However, many of the workers who participated on the Seaway were transient construction people who have by now moved on to other projects.

"We have been successful in interesting in settling in the St. Lawrence Valley the Reynolds Metals Company and General Motors. In my opinion, this has been a notable achievement because our area will become even more known as the center of the aluminum reduction industry in the eastern part of the U. S. With the fabrication program that Alcoa has built up over the years, coupled with General Motors aluminum foundry operation, we should experience a substantial growth in utilizing the finished aluminum product. It is my hope that this industry will continue to grow, and that the people of the area will do everything possible to cooperate with the aluminum and the automotive industries in making their growth here more attractive.

"The other industry which we have not had experience with yet but which has been developing rapidly in the adjacent portion of Canada is the chemical industry. When the Niagara project comes into operation, it is our understanding that substantial amounts of firm power will be available. In my opinion, every effort should be utilized

by the forces in this area together with those in the State, to attract a chemical industry with this large power supply to locate on the banks of the St. Lawrence. We have an ample supply of fresh water, which is a very short commodity in many parts of the country today. At the same hand, we are relatively near to the major marketing areas of the U. S. and should be able to attract a specific industry of this type to locate here.

"As far as the Seaway phases of the St. Lawrence Valley are concerned, it appears to me that the ships will be able to stop at the ports which can be developed in this area as soon as cargoes have been made available to interest them. Already several communities in Northern New York have launched efforts toward developing their ports. Only by hard work and diligent solicitation can these ports be activated satisfactorily."

Mr. Augsbury has expressed the thoughts of many businessmen in the area. Certainly there will be no immediate "explosive" development. Proper utilization of the natural resources of the region, plus the active efforts of its private and industrial citizens will prove the most successful course in the final analysis.

W. Grant Mitchell, Executive Secretary of the Thousand Islands Bridge Authority and current president of the St. Lawrence Valley Association of Chambers of Commerce, puts it this way: "Tourism increase will probably

be the biggest immediate result of the Seaway development. We intend to utilize the recreational aspects of the area to attract industry."

Mitchell also points out that extensive new highway construction in both the United States and Canada tying in with the Valley area will make it considerably more accessible.

In viewing the locational advantages of the St. Lawrence Valley, you must note two important points:

First, the Valley is within one to three hundred miles of the wealthiest, most productive, most diversified industrial complex in the world. These great urban entities, supported by active satellite cities, form a market which is unequalled elsewhere.

Second, the Seaway adjacent to the Valley creates direct access to all the great port markets of the world. In addition, these ports allow easy access to incoming raw materials.

Ports and the Seaway

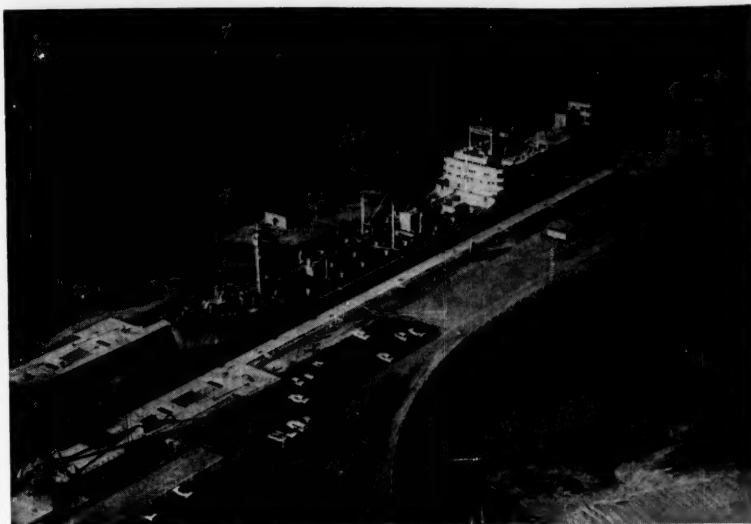
The ramifications of the Seaway as a transportation medium make for certain locational advantages somewhat different from many other areas, even those located along older coastal areas.

An excellent illustration is found in the city of Ogdensburg, which has New York State's leading port on the St. Lawrence River.

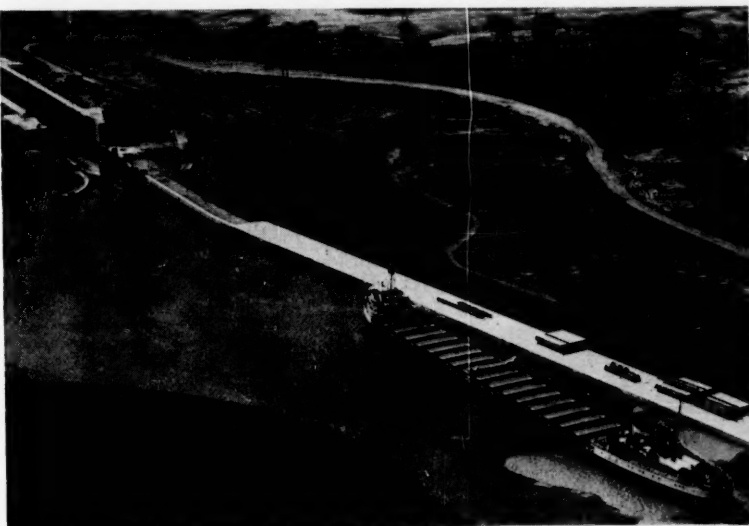
Ogdensburg Harbor is 62 miles (by water) north of Lake Ontario. It is at present the most easterly port on the St. Lawrence capable of accommodating the deepest-draft Great Lakes ships. Controlling depths range from 18 feet to 20 feet. Dock and harbor improvements now underway will affect a river frontage of nearly seven miles.

Land carriers in and out of Ogdensburg are excellent. The Rutland Railroad, whose western terminus is at Ogdensburg, joins the city with most of New England. The New York Central System provides connection with its main lines at Syracuse and Utica. Car ferries offer connections from the New York Central to the Canadian Pacific and Canadian National Railways at Prescott, Ontario across the St. Lawrence River. The International Bridge, now under construction adjacent to Ogdensburg, will be completed next year and will provide land connection across the river.

A number of motor freight lines maintain regular shipments to and from the city and Mohawk Airlines has daily freight and passenger service from the Ogdensburg Airport.



Symbolic of burgeoning international commerce, the Solviken, of Norwegian registry, was the largest saltwater cargo ship to sail the St. Lawrence Seaway during the first season. Here the 610-foot ship is in the Bertrand H. Snell Lock on an upstream transit.



Another view of the Seaway at Massena shows big "Upper Laker," Canada Steamship Lines' Georgian Bay, which dwarfs the 250-foot canal near the lock chamber.

During 1957, Ogdensburg Harbor handled 540,000 tons of water-borne cargo. As the principal port on the south bank of the St. Lawrence, Ogdensburg handles a diversity of cargoes in its water commerce with United States and Canadian communities. More than 246,000 tons consisted of foreign trade with Canada. Exports (including 101,000 tons of coal) exceeded imports by a small margin. In addition to the large tonnage of bulk commodities, Ogdensburg exported a variety of general-cargo products to Canada, including significant amounts of steel products,

industrial chemicals and various other products. Pulpwood, standard newsprint paper, and related lumber and paper cargoes were the principal imports channelled through Ogdensburg, accounting for 72 per cent of the total from Canada. Residual fuel oil, sand, gravel and crushed rock and non-metallic minerals were also among imports coming through the harbor.

Ogdensburg is a terminal point for major petroleum distributors in Upstate New York. For example, during 1957, 153,000 tons of petroleum products were brought to the harbor by barge

ST. LAWRENCE VALLEY

canal vessels traveling from the Port of New York, Albany and Syracuse via the New York State Barge Canal, through the Port of Oswego, and then by lake and river.

Terminal Facilities

Wharves and terminals of Ogdensburg Harbor extend from the upper entrance for about 4,000 feet and into the mouth of the Oswegatchie River; along the city waterfront channel; and into the lower basin. The 11 industrial terminals and docks now in the harbor and the 500,000 bushel Rutland grain elevator, are privately owned and operated. The city of Ogdensburg owns docking facilities, which are used by passenger vessels and are open to the public. In addition, there are the dock of Prescott and Ogdensburg Ferry Company, operators of the passenger ferry linking the two cities, and the railroad car-ferry dock.

Currently being planned is a steel pier to be erected by the United States Customs Service.

St. Lawrence Seaway Development officials have estimated that by 1968 volume of tonnage at the Ogdensburg Harbor will increase to 50 million tons annually from about 25 million tons this year. Although the greater share of the tonnage will consist of bulk commodities, they forecast that between 10 and 12 per cent of the total will be general-cargo items.

During 1958, then-Governor Averell

Harriman, recognizing the future growth potential of the port at Ogdensburg, approved legislation authorizing the creation of the Ogdensburg Port Authority, which is currently pushing ahead port improvement plans.

Natural Resources

Obviously, there is a close relationship between shipping and the resources of the area.

Upstate New York is a rich source of a number of minerals, lumber and other resources which have, to some extent, been used as the base for industrial operations. However, much of this rich lode yet remains to be put to work.

According to a recent economic survey, over a third of the talc produced in the United States has its origin in New York State. The area of the St. Lawrence Valley around Gouverneur is the major processing area of this material. Geological surveys of the area have not noted any evidence of depletion.

Other natural resources are also found in the area such as limestone, graphite, lead, zinc, feldspar, peat, titanium, and a mineral unique to the United States, wollastonite. New opportunities are continually being discovered for industrial uses of these newer metals.

As far as the economy of the Valley is concerned, the dairying industry is perhaps the most important at present. The largest single product is milk, sold

principally in the New York City market. Related products such as skim milk (used in casein and lactose) have a wide variety of industrial applications prominent among which is paper coating, pharmaceuticals, toothpaste, and in the manufacture of animal feeds and amino acids. Milk output of the area is huge. St. Lawrence county alone produces over \$16 million worth of milk products annually. Jefferson and Franklin counties account for \$13.8 million and \$6.3 million respectively.

Related Industries

The largest industry groups in the St. Lawrence Valley besides dairying are: aluminum refining (represented by the extensive Alcoa and Reynolds operations at Massena), paper, and automobile castings.

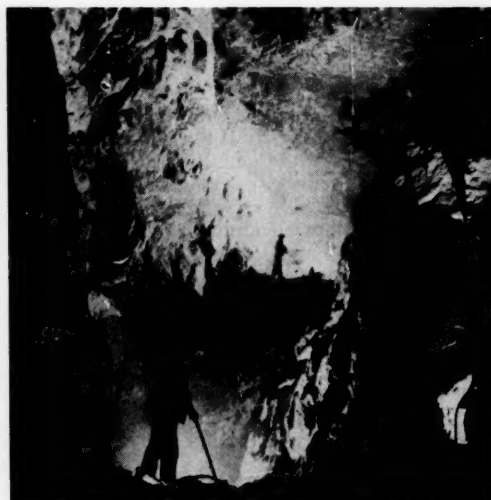
A number of smaller, satellite industries also exist in the area supplying the larger plants. However, in addition to these, interest is being generated in a group of industries often termed "foot-loose."

In spite of much which is said regarding the unusual locational factors of this area of Upstate New York, perhaps the greatest single opportunity for new industrial location lies in the category of these smaller, independent industries not tied down to specific locations. Some of the lures for such enterprises will be discussed later.

Recent development of iron ore deposits in the Seven Islands north of



For the past 50 years paper making has been one of the principal industries of northern New York state. It still flourishes, as do other wood using industries. This is the woodyard of St. Regis Paper Company's mill at Deferiet, near Watertown.



Production at the Balmat and Edwards mines of the St. Joseph Lead Company in St. Lawrence County make the area one of the nation's chief producers of zinc. These men are at work in the Balmat mine, 800 feet underground.

Massena have raised the possibility of steel processing operations on or near the St. Lawrence. Since ore deposits from upper mid-western states traverse the Great Lakes bringing ore into Pennsylvania works it is estimated that as many as 6 or 7 additional trips per year could be made from the Seven Islands than from more distant ports of ore origin. This is made possible by the saving of about two days in transportation time by water.

The New York State Department of Commerce recently conducted a survey of purchasing agents in Central New York as to their needs. Quoting from the results of that survey:

"A tally of all items purchased, disregarding dollar value, showed that primary metals were named 25 per cent of the time as major items of regular purchase, and 30 per cent of the time as items which buyers wished to have nearer sources. This indicated a greater need for nearby sources of steel than would be expected on the basis of all industry purchases. The strength of this excess demand for steel, and the distant source now being employed, combine to demonstrate the availability of a market for the location of a new major steel plant."

Also indicated by the same survey was a need for suppliers of such items as electrical equipment "including fractional horsepower motors, coil windings, cord sets, electrical controls, etc."

Bearing out this the Watertown Chamber of Commerce recently announced that the American Process Company of Toledo, Ohio, has decided to build a branch plant in Watertown for the manufacture of fractional horsepower motors.

As outlined in the Sufrin Report mentioned earlier, several other possibilities for new industries have been observed:

"Both titaniferous and nontitaniferous ores occur in or close to the St. Lawrence Valley (magnetite and hematite). Major iron and steel companies own and operate many mines. The Jones-Laughlin Operation at Star Lake [45 miles northeast of Watertown] is one of the nation's largest. The Lyon Mountain Operation [45 miles southeast of Massena] of Republic Steel produces remarkably high quality ore."

I. D. Takes a Look

A survey team from INDUSTRIAL DEVELOPMENT traveled throughout the St. Lawrence Valley using much the same methods that an industrialist would employ seeking out factors pertinent to the location of new industry.

In order to gain an overall perspective, the I. D. Team flew a light airplane observing industrial sites and transportation patterns in the area. Also officials from industry in the area as well as developers were interviewed.

Watertown

First stop was Watertown.

Located on the Black River 11 miles east of Lake Ontario and 22 miles south of the St. Lawrence River, Watertown is a retail and trade center for a substantial part of Northern New York. The city is 8.7 square miles in area with a population of nearly 36,000.

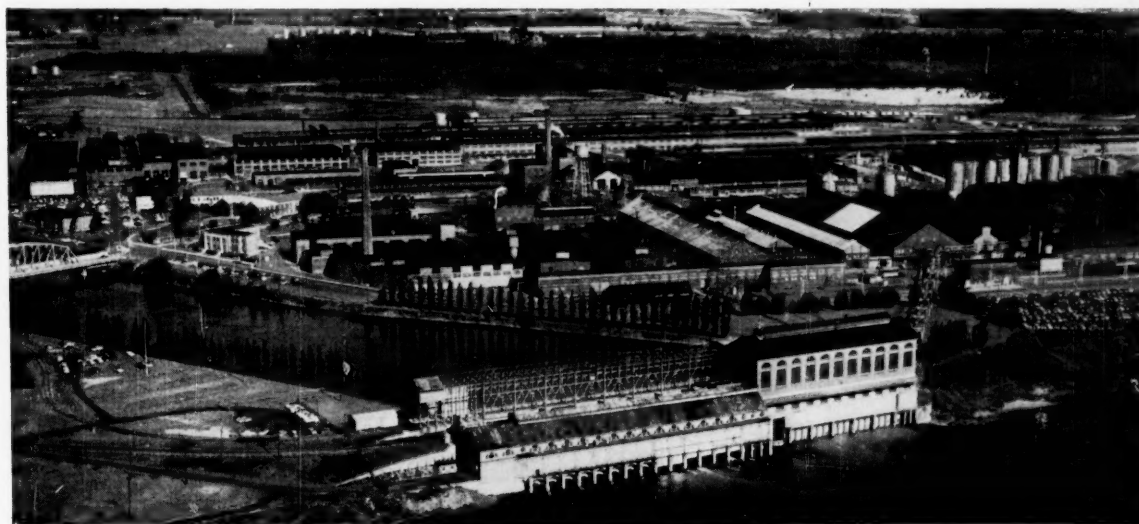
Excellent transportation facilities join the city with all the major centers of New York, Ohio, Pennsylvania and Canada. When the Empire Stateway is completed, it will form a fast truck connection with Canada and large industrial areas to the south and east.

The New York Central System furnishes freight and passenger service connections with main lines at Syracuse.

Mohawk and the Colonial Division of Eastern Airlines provide daily air transportation.

Watertown has a number of small, diversified industries, but the major part of its economy is supported by retail and wholesale trade. It is, in fact, often used as a test area for the marketing of new products to consumers. In addition it is the gateway to a number of popular tourist and vacation areas, such as the Thousand Islands and the Adirondack Mountains.

Watertown's importance as an urban center and as county seat of Jefferson County account to a large degree for the high percentage of its labor force



The Aluminum Company of America's plant at Massena is already a large user of St. Lawrence power. Some of this was formerly generated in the powerhouse shown in the foreground, but under terms of a new contract the New York State Power Authority is furnishing the company enough electricity to assure full scale operation of the plant.

ST. LAWRENCE VALLEY

employed in the construction industry, medical, educational, and related services and public administration. The above named groups account for about 21 per cent of the working force of the city.

About half of the employed people in the city are in the "white collar" occupations—managers, proprietors, professionals, technicians, clerks and salespersons.

Floyd Ruble, manager of Watertown's Chamber of Commerce, met with

I. D. researchers and discussed projects currently underway in the city. Ruble described the newly formed Jefferson County Chambers of Commerce, Inc., a non-profit development organization set up to assist new industry. Its first project was the American Process Corporation mentioned earlier in this report.

The Jefferson County Chambers of Commerce purchased a 28 acre site in Watertown to use as an industrial district designed for small industries. In

order to assist in acquiring industry \$300,000 was raised. American Process had examined eight different locations in four states for their new plant. Watertown was the only New York community considered. They will serve the entire eastern market from New England to Pennsylvania. The Development Corporation was able to assist them in the construction of a \$250,000 plant which is now nearing completion.

Among the nearly fifty plants located in Watertown, of particular interest are two branch plants of Canadian manufacturers—four-year-old G. T. Lanning, Ltd., hat manufacturers, and Sicard Industries, Inc., a five-year-old snow plow and truck manufacturer.

One of the larger employers in Watertown is the Paper Making Machine Division of the Black-Clawson Company. Joseph Hartford, general manager of the plant, told I. D. in an interview that they serve international markets from the Watertown plant. The company has been in existence about 80 years, however Black-Clawson acquired it about five years ago.

The unit prices of the machines vary from \$1 million to \$2.25 million. Most of the parts are shipped in and assembled at Watertown, occasionally utilizing Seaway transportation.

Wage rates are an attractive aspect of Watertown's industrial potential, according to D. William O'Donnell, vice president of the Watertown Savings Bank.

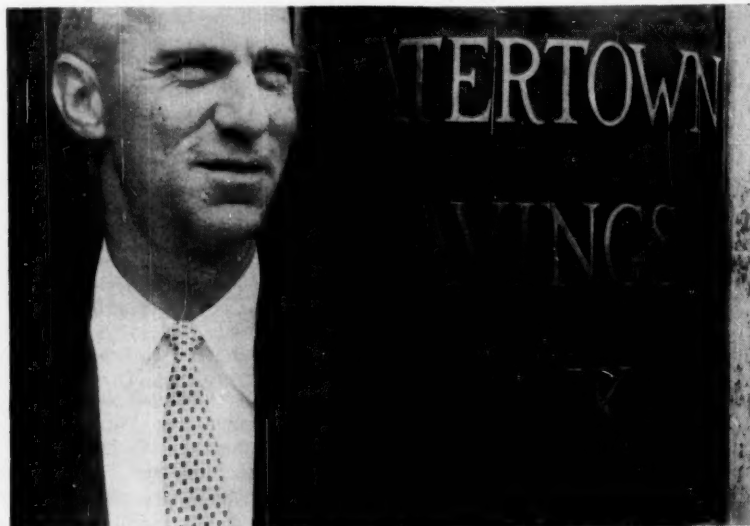
"I believe that relatively low wage rates are one of our biggest attractions," said O'Donnell. "This is due mainly to the fact that few industries here are competitive with each other. Rates here are substantially below the Syracuse levels.

"Black River Bay, also, is the best natural port on the Seaway. This area is a sleeping giant for a process plant."

In 1958 Watertown enacted city sales tax laws in an attempt to improve its fiscal position without materially raising other tax rates. Their experience is summed up by Ronald G. Forbes, city manager of Watertown:

"At the time of the adoption of the sales tax in Watertown, there were many opinions and predictions made on the effect of the tax for the city. Thus far the unfavorable predictions have not materialized.

"Watertown also through its industries provides a source of employment of a great many people who live outside the city and commute to it. Since

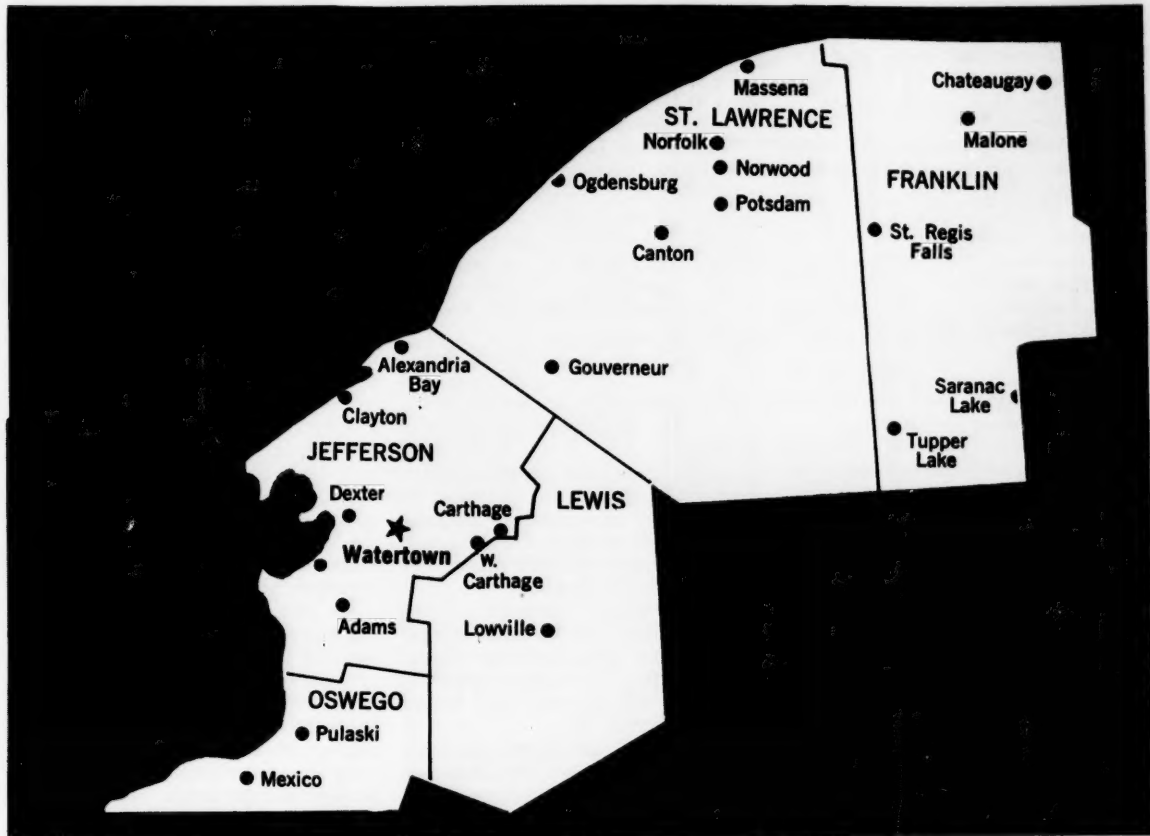


Banker D. William O'Donnell heads the development organization in Watertown. "We have been lucky to get our program off to a fast start by landing an important new plant—while we don't expect all of them to come so quickly and easily, we are confident that new enterprises will continue to move in," he says.



Karl Clinton, Niagara Mohawk's manager in Watertown, is an active worker in local civic efforts. A member of the School Board, he checks progress here on a new elementary school of striking architectural design.

ST. LAWRENCE VALLEY



These are the communities on the U. S. side of the St. Lawrence Valley, which are benefiting from the new developments that are resulting from the Seaway opening and huge new power projects. It is noteworthy that the alert citizenry of the affected communities is well prepared to handle industrial growth.

the city is close to the Canadian border and the St. Lawrence River, it does have a large number of tourists who come through the city during the autumn and summer months. All of these things have had some part in influencing the decision to institute a sales tax and the tax on meals and beverages.

"Revenue from the sales tax has enabled the city council in two successive years to reduce the real estate tax significantly. In 1958-59 the real estate tax rate was reduced by 32 cents, from \$1.77 to \$1.45 per one hundred dollars of assessed valuation. For 1959-60 the real estate tax rate has been reduced by 40 cents, from \$1.45 to \$1.05 per one hundred dollars of assessed valuation. In other words, in two years the real estate tax rate has been reduced by 72 cents."

Typical of local "entrepreneurship" and faith in Watertown's future is illustrated by J. J. Capone who is planning a 108-unit motor hotel for the city

scheduled for completion in early 1961.

Several local officials expressed the feeling that the linking up of the Empire Stateway from Syracuse would accelerate development of the city.

However, Karl Clinton, Niagara Mohawk's Watertown manager (and resident of the city for 19 years) says, "Thruway or not—Watertown's future looks bright. We have stable farm employment which gives the area 'resiliency' during recession periods, and many of the farmers have factory experience which keeps an excellent labor force available."

Good Workers Available

Concerning the labor force available, Clinton pointed out that American Process, when it began planning its Watertown plant, found through personnel interviews that about five applicants were available for each job even though there is no significant unemployment in the area!

Massena, the Power Site

In order to get a closer look at evidences of industrial operations in the Valley, I. D.'s research team flew the entire length of the Valley from Watertown to the northernmost community, Massena.

The economic situation in Massena during the past four years has, as might be expected, been dominated to a large extent by the vast St. Lawrence projects employing thousands of men. However, Massena has for some time been recognized as the fastest growing community in Upstate New York. It is, unquestionably, the largest industrial community in the region.

For the purpose of this report the 1950 census is fairly representative of the normal economic and employment situation in Massena. Most of the labor force (58 per cent) was in manufacturing industries.

The largest single manufacturing employer in the St. Lawrence Valley is

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Alcoa's Massena plant. This firm currently employs between 4000 and 5000 people with an annual payroll of about \$30 million. The plant draws employees from about a 50-mile radius around Massena.

The Massena operation of Alcoa is the oldest aluminum smelting plant in the nation, having started production in 1903. The principal semi-fabricated and finished products at the Massena works consist of wire, rod, bar, cable, and cable accessories and structural shapes. Currently the firm is embarking on a \$25 million modernization program.

Mr. E. G. Schoeffel, manager of Massena operations, has found the area excellent for Alcoa operations.

"We have found Massena," observed Schoeffel, "a good place in which to do business during the past 55 years. The area has an excellent group of people and the Massena Works has continued to grow during this period."

Another metal plant has recently come on the scene in Massena. The Reynolds Metals Company in 1957 began construction of an aluminum reduction plant. The firm started operations this year. The \$88 million plant, located on a 1700-acre tract seven miles east of Massena on the St. Lawrence River, will produce 100,000 tons of aluminum annually. Some of this output will be directly transferred to the adjacent Chevrolet plant for auto parts fabricating. The rest will be cast into

pig and ingot to supply customers throughout the northeast, as well as other Reynolds fabricating plants.

V. G. Kneeskern, manager of the Massena Reynolds plant, pointed to the good labor situation in the area.

"Labor costs in Massena," he told INDUSTRIAL DEVELOPMENT, "compare favorably with the rest of the Reynolds system. Locally we have a fairly high ratio of applicants for vacancies which occur. This enables us to 'pick and choose' among them." He also added that the productivity level of Massena workers is high.

It may be pointed out here that a prime reason for the location of two extensive aluminum operations in the area is the availability of low cost power.

The Chevrolet plant mentioned above came to Massena with Reynolds, in order to have its major raw material supplier close at hand. This \$15 million plant covers 213,000 square feet and employs 700 people.

Richard Walter, manager of the plant, feels that from his point of view transportation advantages are important. Discussing other aspects of his operations in the Massena area, Walter said:

"Living costs, on an average, are a little higher than in some areas that we might be. However, we feel that recreational advantages, for example, offset this factor."

Walter agreed with Kneeskern of

Reynolds in the success of finding qualified personnel in the area. For the original 600 openings at the Chevrolet plant, some 6 to 8 thousand applications were screened.

"We have a very low absenteeism rate here," he observed. "Even in poor weather everybody comes to work."

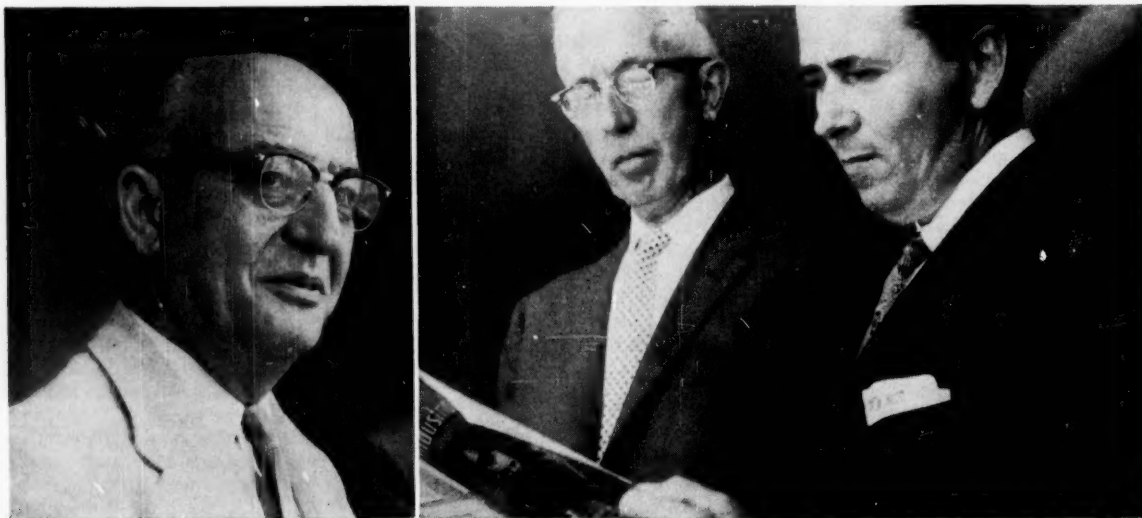
Within the county of St. Lawrence, Massena is set up on a town-village basis. The Town is governed by a supervisor and four councilmen—the Village is governed by a mayor and a four-man board of trustees.

Town Supervisor F. Lloyd Hosmer described Massena's current community expansion projects. For example, the Massena airport has recently undergone \$600,000 improvements which include runway extensions, wider taxi strips and night lighting. The indebtedness of the airport is being paid up this year which will probably reduce the Town's budget.

Also a 108-bed hospital is owned and operated by the Town.

In 1954 a \$10 million school construction program involving four elementary schools was undertaken. The projects were completed this year.

In 1954, the Town of Massena adopted a zoning ordinance in anticipation of the rapid development of the town during construction of Seaway projects and thereafter. The ordinance contains an interesting feature providing for planned development districts. This type of district was intended to



Plant managers who met with ID's editor to discuss business climate in the Massena area included (left to right) V. G. Kneeskern, manager of the Reynolds plant; E. G. Schoeffel, Alcoa manager, and Richard Walter, manager of the Massena Chevrolet plant. Mr. Kneeskern sounded the keynote when he said, "Labor costs in Massena compare favorably with the rest of the Reynolds system." He also added that the productivity level of Massena workers is high.



Long-time contributors to the development of the Massena area are (left) F. Lloyd Hosmer, town supervisor, and James Dixon, who is the local manager for Niagara Mohawk Power. Mr. Hosmer notes with pride that Massena's airport has recently been expanded and that the community has an impressive Master Plan.

provide essential flexibility in dealing with proposals for large scale developments on the merits of a specific proposal.

A Master Plan for Massena, prepared last year, suggested that some modifications be incorporated in the ordinance to cover more specifically smaller industries which are not particularly suited for the original plan. This suggestion is currently under consideration.

Massena has recently acquired a new manager for the Chamber of Commerce. He is Bill Coventry, an energetic and affable Englishman who moved across the river from Cornwall, Ontario, where he was Industrial Commissioner.

"Massena has the greatest potential for industrial and tourist development in North America," said Coventry. He laughed about someone's comment that the streets of Massena were "quiet."

"They're in the stores buying things," he observed.

Current plans through the Chamber of Commerce include the formation of a new Industrial Development Committee, with its first major project to establish a public dock.

Coventry also pointed out that among many opportunities for new industries in the Massena area were for a textile factory to utilize the high degree of proficiency in needlework by local female labor.

Massena is also the office location for the St. Lawrence Seaway Development Corporation. This organization,

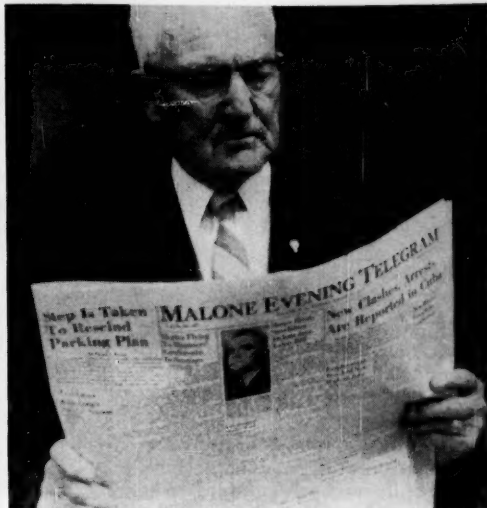
employing about 200 people, operates under the United States Department of Commerce and oversees most of the United States' interest in the Seaway. Also assuming much responsibility for use and development of the river is the New York State Power Authority, operating under license from the Federal Power Commission. Their Canadian counterparts are the Hydro-Electric Power Commission of Ontario and the St. Lawrence Seaway Authority.

Among the many aspects of the Seaway's operations administered by the Corporation is the assistance of industries seeking to find new utilization for the Seaway. Lewis G. Castle, Administrator of the Corporation was recently quoted:

"Anyone who endeavors to predict the developments which will take place in the economy of the heartland of both countries runs the risk of underestimating rather than overestimating the possibilities. Let us not forget that the development of industry and commerce which has occurred in this region during recent years has gone far beyond the prognostications made only ten years ago. The Seaway will be an additional element in the bringing about of further economic expansion in the years to come."

Malone's Plans

Located midway between the St. Lawrence River and the new Plattsburgh Air Force Base, Malone is a modern community of slightly more than



"I'm enthusiastic about our future," Malone newspaper publisher Leon L. Turner told ID's editor in a sidewalk interview. A thriving community near the Northeast end of the Valley, Malone has a strong economy based upon the flourishing dairy industry.

12,600 residents. The Village of Malone is the county seat of Franklin County, and is in the center of a flourishing dairy section. It is the trading center for the northern portion of the county and an important port of entry for Canadian tourists, rail and air freight.

During the last few years the Chamber of Commerce of Malone has sponsored an active industrial development program. Various local groups have raised support capable of sponsoring a building proposal up to \$300,000. Industrial enterprise in the Malone area is diversified—perhaps surprisingly so. Even though the community is considered to be a dairy center, its three largest industries, employing together about 800 people, are not dairy industries. The Tru-Stitch Moccasin Company, the largest employer is a shoe manufacturer. Another shoe manufacturer, Shields Slipper Company employs about 300 people.

Eight other manufacturers in the area range from products such as concrete pipe to lumber products.

Malone is, in general, a prosperous community. Retail sales currently are in excess of \$286 million annually. Of 12,650 households in the Village area, there are 12,450 automobiles registered.

Malone's daily newspaper is the *Malone Evening Telegraph*. The *Telegraph's* editor, Leon L. Turner, a Malone resident for 40 years, told INDUSTRIAL DEVELOPMENT that optimism for Malone's future has taken a

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big upswing since the St. Lawrence Power and Seaway Developments have come to fruition.

"Local residents," said Mr. Turner, "have sometimes missed some opportunities for developments that newcomers have recognized. We're still trying, however, because progress is the only direction in which a modern community can move."

The Port City

Earlier in this report it was stated that the leading United States port on the St. Lawrence River is at Ogdensburg.

The city is situated approximately midway between the site of the St. Lawrence power and seaway projects and Lake Ontario at the Thousand Islands. Because of the well-developed transportation network serving the area, the city dominates trade between Eastern Canada and the northern counties of New York State.

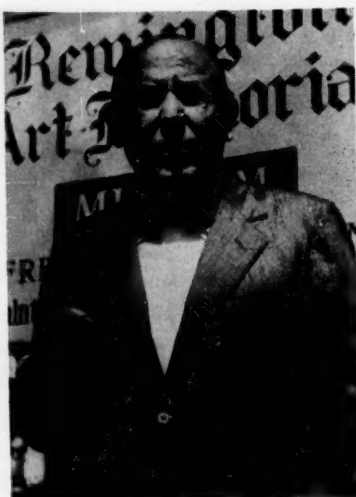
Ogdensburg's industrial economy is well-developed and has tended to enlarge and diversify through the years. A development corporation was formed this month through the Chamber of Commerce with capital sufficient to finance construction for sale or lease to an industry making a specific proposal.

One of the largest industries in the city is the Diamond-National Corporation. The firm, which employs about 250 people, manufactures food containers, paper plates and other paper products. Next door to Diamond-National is the Standard Shade Roller Company employing about 300. A number of other manufacturers round out the community's industrial economy ranging from three milk product firms to drapery hardware and paper fasteners.

Like many parts of the St. Lawrence Valley, virtually unlimited supplies of fresh, usable water has strongly influenced the pattern of industrial development. Many firms use St. Lawrence water untreated just as it comes from the river. In Ogdensburg a pumping station delivers water to sand filters capable of delivering a maximum capacity of five million gallons per day.

In an interview with INDUSTRIAL DEVELOPMENT, Harold Frank, chairman of the Chamber of Commerce's Industrial Committee said:

"Ogdensburg is ready to help a new plant locate. We are set up to assist in acquiring or constructing a building or any other real estate. We have a good supply of labor and the labor record is



Franklin Little, Ogdensburg publisher, is one of the St. Lawrence Valley's most articulate spokesmen. While he is proud of the region's past as evidenced by the outstanding Frederick Remington art museum, he is even more enthusiastic about the area's future potential in tourism and in development of new technological industries.

good. In fact, 97 per cent of local labor is native-born."

Mr. Frank pointed out several opportunities which now exist. For instance the quantities of water and availability of water transportation would be ideal for a heavy chemical operation. There is also room for an aluminum fabricating plant.

In observing the large amount of commerce between Canada and the United States, Mr. Frank commented that a number of opportunities exist for branch-plant operations of Canadian firms. One firm, in fact, illustrates this. The Walters Axe Company, a Canadian firm, operates a plant near Ogdensburg. Axe heads are fabricated in Canada and shipped to the United States where the handles, made from New York State wood are attached. Distribution throughout the United States is accomplished from the Ogdensburg plant.

Currently Arthur E. Reed Associates of Syracuse is completing a zoning and urban planning study of the city scheduled for presentation in the spring of 1960, according to Mr. J. S. Graham, executive-secretary of the Chamber of Commerce.

Potsdam, Cultural Center

The education center of Northern New York is Potsdam. Here are located the Clarkson College of Technology and the State University College of Education.

The Teachers College developed from a school first opened in 1801. The college was sold to the State of New York in 1942 and since then extensive modernizations and new construction have made it a virtual educational showplace.

Clarkson College, founded in 1896, is one of the best engineering colleges in the country. It furnishes high quality technical personnel to industry throughout Northern New York, and its graduates can be found in many firms over the country. Clarkson offers degrees in chemical, civil, electrical and mechanical engineering, chemistry and business administration. Potsdam is a center for Upstate New York's favorite sport—hockey.

The community is situated on the Raquette River in the heart of the Valley's rich dairy section.

Potsdam's central location makes it an excellent spot for the St. Lawrence Valley headquarters for the Niagara Mohawk Power Corporation. From his office in Potsdam, Niagara Mohawk Manager Henry MacIntire supervises the power corporation's extensive services in the Valley area.

Referring to the company's widespread expansion of facilities in the St. Lawrence Valley, Earle J. Machold, president of Niagara Mohawk, said: "We are continuing to expand our facilities in the St. Lawrence Valley because we know that herein lies an area of growth unparalleled in the region served by Niagara Mohawk. Today, in the immediate Potsdam area alone, Niagara Mohawk has an investment of approximately \$35 million.

"Thus the tangible evidence of our faith in the future of this area is being expressed in dollars and in concrete, aluminum, steel and copper."

Among the several industries of Potsdam is the Nekoosa-Edwards Paper Company. The plant, which has been in existence since 1898, was purchased by Nekoosa-Edwards in 1957.

Burt Kassing, plant manager of the Potsdam operations, estimated that the firm employs about 330 people. When asked why his firm had decided to acquire the plant, Mr. Kassing said:

"Our principal reason for coming to Potsdam was to get overnight shipping to the New York City area."

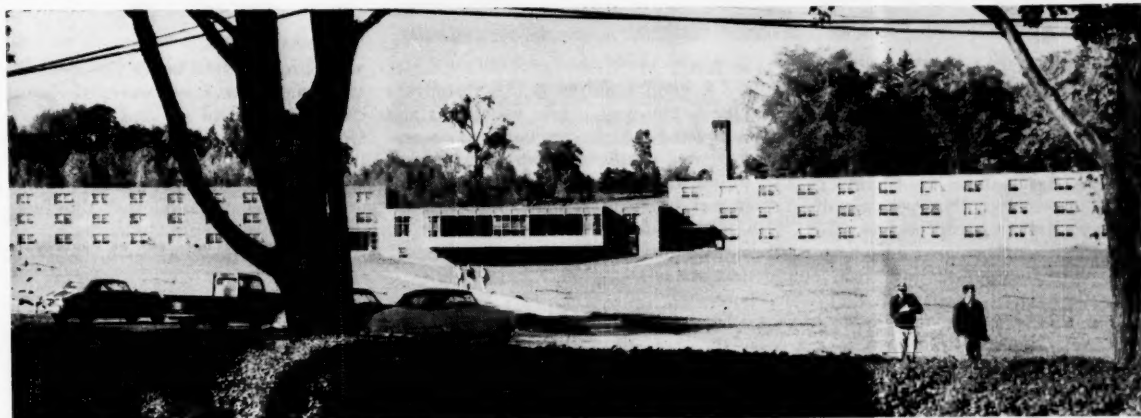
He commented that living costs were slightly higher than in some parts of the Midwest where other company operations are, but he added, "Frankly I like living here. In a couple of hours I can be at Lake Placid or the Thousand Islands."



Says Earle J. Machold, president of Niagara Mohawk: "We are continuing to expand our facilities in the St. Lawrence Valley because we know that herein lies an area of growth unparalleled in the region served by Niagara Mohawk."



Another sidewalk interview finds Bert Kassing of Nekoosa Paper Company (left) and Niagara Mohawk manager Henry MacIntire (right) discussing developments in the Potsdam area. Mr. Kassing moved from Wisconsin when Nekoosa bought the local mill and he says "We like it here—it's such a pleasant place to live."



Clarkson College of Technology at Potsdam is rated as one of the best engineering colleges in the nation. It offers degrees in chemical, civil, electrical and mechanical engineering, chemistry and business administration. Clarkson graduates may be found in many firms over the country. This is attractive Hill dormitory at the college.

Gouverneur—Mines and Minerals

The village of Gouverneur is located in the southern part of St. Lawrence County and is the retail center for this prosperous dairy and mining area. The community is about thirty miles from seaway ports putting it within economical trading distance of that transportation carrier.

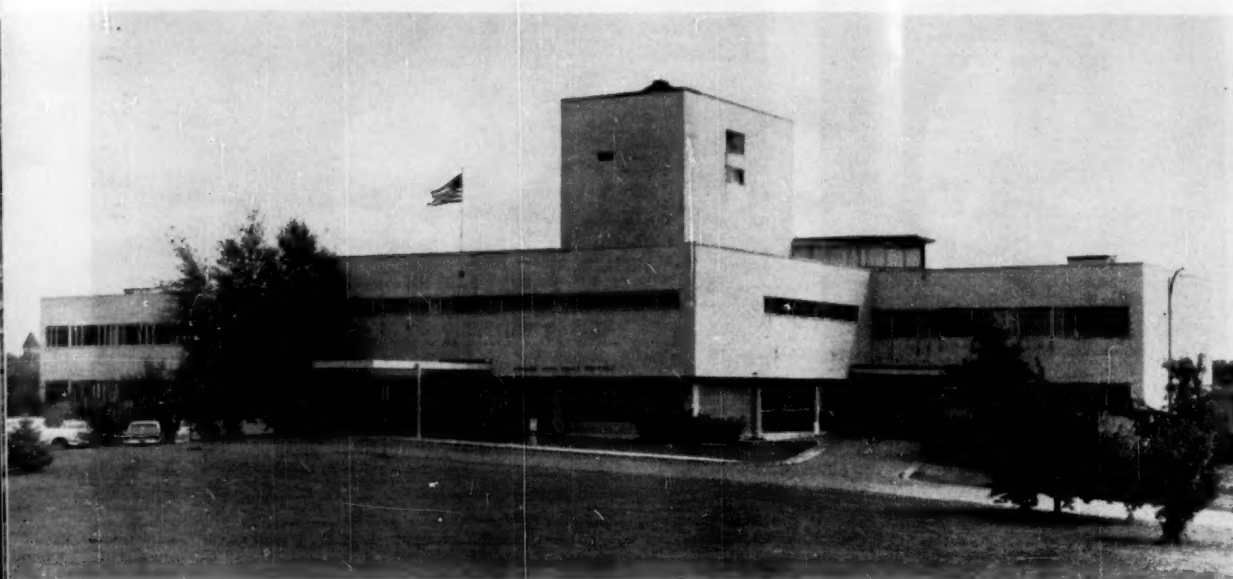
Mining, in addition to the extensive dairying interests, is a dominant factor in Gouverneur's economic life. The St. Joseph Lead Company produces about 2,200 tons of crude ore per day at mines in Balmat and Edwards, lo-

cated within a ten-mile radius of the city. The company produces about 100,000 tons of zinc concentrates each year. Ore production has been almost continuous since the mines first began to function in 1926. Company officials report that there is no indication of a depletion in the mineral resources of the region.

Fibrous talc of exceptionally high quality is mined and milled in or near Gouverneur by two companies, the Gouverneur Talc Company and the International Talc Company. Closely related to the community's economic life is also the Jones and Laughlin Steel Cor-

poration's Benson Mines near Star Lake.

Of the industries located in Gouverneur Village, the John W. Rouse Construction Corporation is outstanding for its meteoric expansion over the past 23 years. Started on a small scale by John W. Rouse, the company in 1955 had a volume of construction totalling \$6 million, and now employs more than 400 engineers, supervisors, industrial designers and workmen in its jobs throughout the northeastern United States and Canada. The company completed five new elementary schools for the Gouverneur Central School District last year, has done considerable indus-



The Edward John Noble Hospital at Gouverneur, New York, is one of the plus factors in that prosperous community. Located in the southern part of St. Lawrence County, Gouverneur is the retail center for a flourishing dairy and mining area. It also is only 30 miles away from seaway ports, putting it within economical trading distance of water transportation.

trial building for talc, milk plant, paper companies and many other types of firms.

Mr. Rouse, head of the company, is vice president of the St. Lawrence Valley Association of Chambers of Commerce. Recently, speaking of the Valley's future prospects, he said: "I don't know of any area anywhere that has more to offer an industrial company than the St. Lawrence Valley. Certainly this is borne out by the large nationally known companies that are now locating here, and even more forcibly by the major expansion projects now underway at most of the industrial plants which have operated successfully here for a great many years."

Prospect for Growth

There are many progressive, articulate businessmen in the St. Lawrence Valley who are optimistic about the area's chances for future growth. One of the Valley's best-known citizens is Franklin Rockafellow Little, of Ogdensburg. Mr. Little publishes newspapers in Ogdensburg, Potsdam and Massena. A long-time resident of the area, he has been a staunch supporter of the seaway throughout its recent history.

"Nobody realized the tourist potential of the Seaway," observed Mr. Little. "Now we are beginning to catch up. New tourist facilities are being built, such as hotels, motels, parks and

so forth.

"A good example is this restaurant [*the Grandview, a new restaurant just completed which commands a sweeping view of the St. Lawrence River*] which was not here a few months ago. It was built by people with local initiative and faith in the future.

"We have really only just scratched the surface of the tourist industry here."

Discussing the industrial advantages of the area, Mr. Little pointed out that the Port of Ogdensburg, for instance, is 550 miles nearer to English ports than Detroit.

"So far we haven't merchandized the area for the 'foot-loose' plants which would find it definitely attractive. There are excellent technical schools here such as Clarkson and St. Lawrence University—they're strong in chemistry and physics.

"In Ogdensburg we have had a real 'boot-strap' operation which will show results on the completion of the \$22 million International Bridge just outside of town."

The story began in 1930 when a railroad bridge was proposed at Morris-town. President Roosevelt later formed a bridge commission to which Mr. Little was appointed. Three bridges were proposed, of which the one at Ogdensburg was the third. Other federal commissions and state authorities

were brought into being and deliberation continued. Costs were, of course, continuing to go up and the area at Ogdensburg wasn't able to show enough traffic volume to justify the bridge.

Then came the Seaway.

Mr. Little proposed that the International Bridge be included as part of the Seaway project. Soon Governor Harriman was asked to support the project and he went along to the extent of a \$25 million bond project with the understanding that the Ogdensburg Bridge Authority would sell the bonds.

The effort which had stretched out over 26 years is paying off early next year when the bridge will be opened.

Living in the Valley

Two major attractions lure thousands of visitors to the St. Lawrence Valley every year: the Seaway with its dams, locks and parks, and the famous Thousand Islands.

More impressed by round numbers than accuracy, the first explorers of the area who named the Islands did not count the more than 1,700 islands which string out along the area where Lake Ontario empties into the St. Lawrence. Some are, of course, just jettings of rocks, but others are large enough to hold entire villages. Most of them are just about right, however, for a fishing camp or summer home. Flying over the Islands one observes every

type of structure from small shacks to huge castles—all built for the purpose of enjoying the superlative recreational advantages of the area.

The Thousand Islands Bridge at Alexandria Bay is one of the principal gateways between the United States and Canada. Near the bridge on Heart Island, opposite Alexandria Bay is the exotic Boldt Castle. It is a replica of an old German castle built by one-time owner of the Waldorf-Astoria Hotel. Excursion boats take visitors to the island regularly.

The United States-Canada traffic over the Thousand Islands Bridge is indicative of the popularity of the area. With the exception of three years during World War II, traffic has risen steadily from about 149,000 vehicles in 1939 to 724,962 vehicles counted during 1958. Figures already tabulated for this year indicate that close to 800,000 vehicles will use the bridge by February of 1960.

Fourteen state parks are in the St. Lawrence Valley region. These offer virtually every type of recreation obtainable anywhere including some exceptional fishing locations.

Of special interest to collectors of Americana is the unusual Frederick Remington Art Memorial in Ogdensburg.



The Village of Alexandria, shown in a pilot's-eye view, is the center of a popular resort area where thousands of persons go each summer for fishing, boating and swimming among the famous Thousand Islands. Actually, there are more than 1,700 islands strung out in the area where Lake Ontario empties into the St. Lawrence. Some of these are just jettings of rock, but many hold entire villages and others are just right for a fishing camp or summer home where one can enjoy the excellent recreational advantages there.



A string of good-sized perch shows that this feminine angler has had a successful day fishing in the Thousand Islands. Fishing is unusually good all season long throughout the area.



There are 14 state parks in the St. Lawrence Valley region. They have facilities for virtually every type of outdoor recreation that can be found anywhere and are enjoyed each year by many thousands of persons. Here a group is shown relaxing after a boat ride at Clayton.

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Remington, a native of the St. Lawrence Valley, is remembered as the most outstanding artist of the old west. His paintings and sculptures of the "wild west" are revered throughout the world. This comprehensive collection is a special interest of Franklin Little mentioned earlier in this report. Mr. Little is president of the Memorial's Board of Trustees.

The monumental Moses-Saunders Powerdam has already become an important Upstate New York tourist attraction. The extensive control facilities and administrative building on the United States side of the dam have been designed to satisfy the curiosity of people about the inner workings of the project.

The Project will generate enough interest to bring at least half a million people to the dam area this summer. Officials of the St. Lawrence Seaway Development Corporation estimate that in five years the number of visitors will run to several million per year. To accommodate the large number of people who will visit the project the Power Authority of New York State has launched an extensive program of recreational development. It will include park areas, beaches, camp facilities, overlooks for the locks, landscaping, reforestation and renovation of the area.

Park facilities now being built are so attractive that the area has been dubbed the "brightest gem" in the diadem of the New York State Park system.

It is expected that the Town of Massena where the largest dam is located, will become the third corner of a tourist and recreational triangle which includes the Thousand Islands and the Adirondacks.

Area-Wide Cooperation

From the standpoint of industry, the power now usable in the St. Lawrence Valley is of outstanding importance. Consequently the region's largest power supplier, the Niagara Mohawk Power Corporation has assumed a good deal of the initiative in promoting the area.

Niagara Mohawk's Area Development Department, headed by Richard F. Torrey, works with area managers such as Henry MacIntire in the Potsdam central Valley headquarters and Karl Clinton in Watertown in coordinating development efforts with local and area groups.

The Department's plant location services include:

1. Single source information—the department is equipped and prepared to provide you with comprehensive information relating to all phases of a plant location project, such as markets, transportation, labor, raw materials, utilities, water and neighboring industries.

2. Sites—The department maintains a continuing inventory of industrial sites throughout its service area, and complete information is available on all factors affecting the site and related to your requirements.

3. Buildings—Through the company's district offices an up-to-date inventory of available industrial buildings is maintained in the Area Development office.

4. Communities—Detailed analysis of community facilities, taxes, govern-

ment and the multitude of other characteristics important to your industry.

5. Your inspection—The department will make complete arrangements for your personal inspection of communities and sites and for the contracts with local sources of information as you may desire.

Cooperating with Niagara Mohawk in furnishing site information are the development departments of the railroads serving the area, the chambers of commerce, banks and other agencies.

"SLVACC"

About six years ago various communities in the St. Lawrence Valley determined that closer cooperation was necessary in order to meet the challenge of Seaway developments and encourage economic progress in the region. Realizing that new opportunity was around the corner both for industrial progress and greater tourist attractions, the St. Lawrence Valley Association of Chambers of Commerce was formed.

Paul A. Crouch, formerly president of SLVACC and an executive of the Aluminum Company of America, describes the organization this way:

"It transcends community and political boundaries. It is inclusive. In fact, it is a state of mind to most of us. We believed that, by developing the St. Lawrence Valley concept, we would develop a spirit and unity transcending cities, towns and counties. The idea was to develop this concept in such a way that each city, town and county in the area could cooperate to improve its own welfare. We hoped to provide a framework to allow and encourage local chambers, political leaders, units of government, business, labor, industry, and agriculture to join hands in developing this 'fastest growing empire of the Empire State.'"

SLVACC adds its support to the extensive development programs of the Niagara Mohawk Power Corporation. Niagara Mohawk, recognizing early that the area was ideal for development, launched a long-range program seeking to interest industry in locating throughout the Upstate New York area. By tying in their programs with the SLVACC, a coordinated effort is underway which will be extremely helpful to you in seeking a location in the area.

The Association recently announced the appointment of Don Foster, a professional developer, as Executive Vice President. Foster will devote full-time activity to economic development programs.



Richard F. Torrey, who has headquarters in Syracuse, is director of Niagara Mohawk's Area Development Department. In this capacity he works closely with area managers throughout the St. Lawrence Valley region.

I. D. AREA SERIES

The accompanying editorial survey of plant location factors in the St. Lawrence Valley was conducted by INDUSTRIAL DEVELOPMENT under the auspices of Niagara Mohawk Power Corporation. Reprints of this report are available from Richard F. Torrey, Director of the company's Area Development Department, 300 Erie Boulevard West, Syracuse 2, New York.

State Agencies Play Vital Role

In this detailed study, the Secretary of the Pennsylvania Department of Commerce tells how various state development agencies—central sources for engineering and economic data—can help you with many of the problems involved in plant and facilities location . . .

By William R. Davlin

IF one can generalize, a plant or facility location survey in its initial states often involves more than one state, and almost invariably more than one potential location within each state. Thus, typically, the state industrial development agency is an available central source for engineering and economic data on the entire state, and for general and much detailed data on local areas. The local industrial development agency is obviously a source for data on the local area and specific sites; in many instances it provides, or provides access to, other information pertinent to the location problem, apart from survey data, as will be noted elsewhere in this paper.

Lest this leave the implication that state and local agencies are the only or the dominant agencies in the industrial development field, let me quickly recognize that the utilities, within their service territories, and railroads, along their lines, are, similarly, sources for area, local and site data, as well as for data on their own freight, power and fuel services. The industrial realtor likewise, with special emphasis on properties he has available for lease or sale.

These several industrial development agencies—state and local, utility, railroad, realtor—are not everywhere alike, either in the specific nature of their programs nor in the size of budgets and personnel they allocate to the

work. From management's standpoint, they do, however, serve a common function as sources of plant location survey data.

The industrial development agencies of state government had their modern origins in the state planning movement of the 1930's. The history shows sporadic development efforts in a few of the states earlier than that. But during the 1930's, under the aegis and partly with funds from the National Resources Planning Board, virtually all states created state planning boards. Most of these passed out of existence in World War II, as did the N.R.P.B., but were succeeded by the types of development agencies we presently find in state government.

The state planning boards of the 1930's were not all alike in program, budget and funds, but as a result of the influence of the National Resources Planning Board, all were active to greater or lesser degree in making inventories and analyses of natural and other industrial resources, economic opportunities, industrial production, population, income, etc.

Thus, state industrial development agencies today have a predisposition toward data collection and dissemination; frequently, their files and libraries are a continuation of the inventory efforts of their state planning predecessors. This general factor is at the core

of their significance to management in connection with plant location matters.

A realistic examination of the contribution the state industrial development agency is in a position to make to a given location problem begins not with the agency itself, but with other and older agencies of state government and, in part, with federal-state programs in which they are involved.

A large segment of the range of data required for, or that should be analyzed in the course of, a plant location survey is collected and maintained by, or generated in, programs of agencies of state government. Such state agencies, by and large, consider it their obligation to support the state industrial development agency, data-wise. As a rule, this is spelled out in the statutes creating state industrial development agencies; it is invariably made plain in the administrative policies of the executive branches of state governments.

Thus, formally or informally, the state industrial development agency is normally a repository of state governmental data essential in thorough-going plant location surveys, and other such data, and a single, central point of contact and liaison between the "industrial prospect," on the one hand, and the data-supplying state agency, on the other.

Because of this relationship between the state development agency and data-

supplying agencies of state government, the function and potential value to the industrial firm or consultant in connection with plant location matters cannot be gauged by the size of the industrial development agency budget or the size of its staff, though some of these are sizable. Rather, the function and potential value reposes in the convenient access the state industrial development agency provides to authoritative state sources of pertinent location survey data.

The "industrial prospect" or consulting firm can greatly reduce the effort, wear and tear, cumbersomeness, staff time, travel—and thus total costs—of the location survey by judicious use of the data services available through state industrial development agencies.

This paper is not to be a lecture on the factors involved in location of a

plant or industrial facility, upon which you are already experts, nor a recital of statistical and factual data available from state government. However, to lend tangibility to the broad assertions I have been making we should pause to take note of some of the major location factors with respect to which agencies of state government are authoritative data sources, prosaic as the listing may be.

1. *Topographic Data.* In the office of the state geologist or the state's geological survey one will find all of the U. S. Geological Survey topographic maps available on the given state, and the most recent information on the status of topographic mapping—a continuous program on which there is much up-dating being done and to-be-done in most states; one will frequently

find there, also, related aerial photography. Where surveys involve extensive site acreage and terrain problems, these materials are survey requisites;

2. *Minerals Data.* The state geologist or geological survey is, likewise, the primary source of metallic and non-metallic minerals data in the United States; in those states where mining and mineral resources are of more than ordinary significance, the state agency charged with responsibility for mining or oil and gas regulations is a supplementary source of minerals data. The U. S. Geological Survey and the Interior Department's Bureau of Mines each have extensive cooperative relationships with these agencies of state government;

3. *Water Data.* Again, the state geologist or geological survey is the primary

Recent Appointees In State Development Agencies



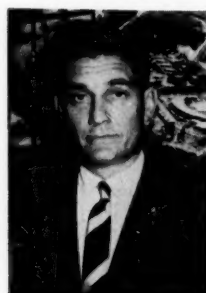
E. O. Sowerwine, Jr., Director, Montana State Planning Board.



Walter W. Harper, director, South Carolina State Development Board.



Walter E. Dickerson, executive director, Texas Industrial Commission.



Max Genet, Jr., director, Oklahoma Department of Commerce and Industry.



Fred W. Phelps, director, State of New Mexico Economic Development Commission.



Abit Massey, director, Georgia Department of Commerce.



Jack Lehman, director of economic development, state of Nevada.



Leland Jones, director, Alabama State Planning & Industrial Development Board.

STATE AGENCIES

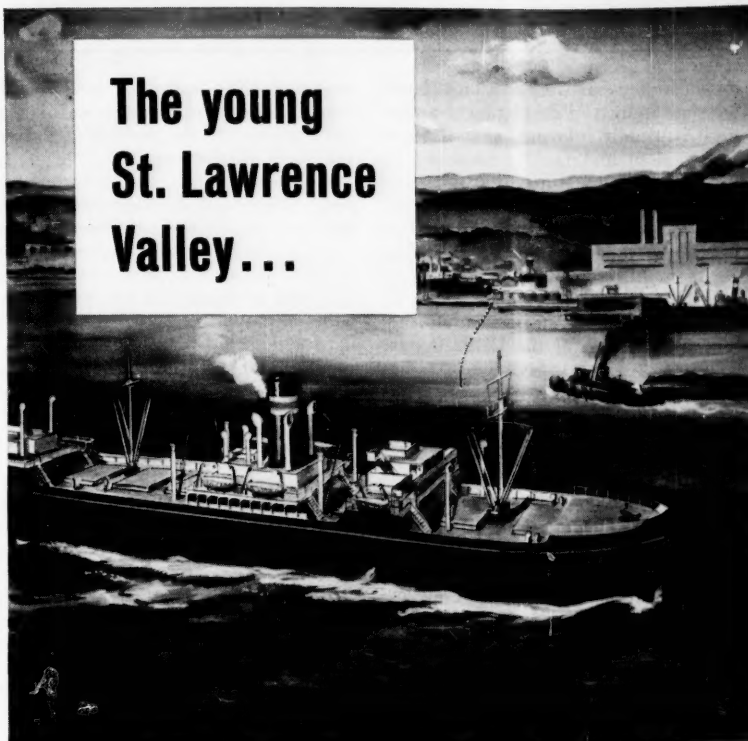
source for localized water data, especially ground water, both as to quantity and physical and chemical characteristics, its work in this field normally being in connection with U.S.G.S. Surface water data, also a major concern of the U.S.G.S., both as to stream flows and qualitative characteristics, will be found either in the state geological offices or in the department or bureau concerned with conservation, forests, flood control or, in the West, irrigation. (No standard pattern of administrative organization exists for these functions in state government.);

4. *Forest Resources.* Forest conservation has been a major preoccupation with state government since the early years of the Century, and elaborate cooperative relationships exist between the U. S. Forest Service and the state agencies charged with forest resource responsibilities. Resultingly, these latter agencies are rich sources of forest information—data on annual growth and drain, by species and geographically, and on utilization, published and unpublished;

5. *Labor Supply; Wage Rates.* The sub-federal or geographic breakdowns of labor force, employment, unemployment, wage and labor relations statistics carried in publications of the U. S. Department of Labor's Bureau of Labor Statistics and Bureau of Employment Security stem almost wholly from the state-administered federal programs in the fields of unemployment compensation and employee placement (the state "Employment Service[s]"). These data exist in each state in the agencies administering the above programs, and on a more current and localized basis, whether in published or available unpublished detail.

6. *Data on Established Business and Industry.* The broad national, geographic and localized picture of established business and industry in any state is provided, again, in the federal census of Population, Agriculture, Manufactures, Business and in the Minerals Yearbook. Except for the latter, there is the persistent need for up-dating when the plant location survey requires current, detailed, state-wide, localized information on established business and industry—for market, supply source or other studies. Data of the state employment services and unemployment compensation agencies, again, supply a substantial part of that need. A number of the states publish, and in their files maintain, industrial "directory" type information, with data

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has the second largest water flow in the world (only the Amazon has more).

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Already established in the Valley are such industries as aluminum refining, automotive castings, paper and dairy products. Opportunities in related fields are plentiful, especially in woodworking, metallurgy, metal fabrication and the manufacture of electrical components. Sites, many of them on the River, are available. For specific information, contact the Director of Area Development, Niagara Mohawk Power Corporation, Dept. I-11, Erie Blvd. West, Syracuse 2, New York.



on a company as well as a local basis; the state industrial development agency itself is usually informed as to the most recent plant and facility locations, including those announced but not as yet in operation. Where agricultural production or the farm market is involved in a location survey, the state's College of Agriculture, in its agricultural economics unit, is the standard source for current, detailed, localized data, the source for much of the U. S. Department of Agriculture's published data on these matters;

7. State and Local Taxes. This is a familiar subject to those on the firing line in industrial development agencies, of whatever type. As you in management can see from the industrial promotion advertising, state and local taxes are virtually NON-EXISTENT as a cost factor in every state, and each of the 49 states has a better tax situation to offer new industry than the other 48! Be that as it may, the Chairman and the President and the Board of Directors, in their skeptical cynicism, will expect a more precise report on the matter from the location survey "team."

The agency administering state tax laws and the state agency concerned with problems of tax equalization among counties, municipalities, school districts and other local taxing jurisdictions are central, state-wide sources for the facts and figures, complicated as they often are, on the tax burden the new plant or facility will bear. Moreover, with respect to non-property taxes on corporations, the tax bill on the given plant or facility frequently depends so largely upon the nature of the business, the financial structure of the company, and the state's interpretations of its own tax statutes, that precise calculations of probable tax costs in the new location can be made only after consultation with the legal and administrative staffs of such state tax agencies.

Some of these state agencies and others are sources for still other information pertinent to location surveys—incorporation procedures, sanitary and waste disposal regulations, industrial safety laws, workmen's compensation, unemployment compensation, current and prospective highway projects and plans, etc.

This perhaps tedious recital will at least serve to put into focus a major "Role" of state industrial development agencies in plant and facilities location in terms of useable to management per-

sonnel dealing with the problem. In brief, a dozen or so agencies of state government are the competent sources for much of the required data; data-wise, they support the work of the state's industrial development agency; the state industrial development agency aims to be a central repository for much of the data of these several agencies, and a channel of communication between the industrial prospect and the data and technical specialists at work in these sister agencies of state government.

No Duplication

The state industrial development agency—in its reach if not in its grasp—does not stop there. It does not need to duplicate the work of utilities and railroads with respect to information on power rates, rail freight costs and transit times, though it will frequently have generalized information on these matters and close working relationships with those organizations—which, within their territories and along their lines, will frequently have the full storehouse of plant location factors data. The state agency will, in many instances, have abundant detail on industrial parks, sites and "available" buildings, and

close contact with industrial realtors on the latter. Most of all, additionally, since it is charged with the duty of "selling the state" to new industry, it will have localized, state-wide information on "community characteristics," economic, social and institutional. It will have, or have ready access to, location factor data for which there are as yet no corresponding industrial development agencies—truck and water transportation, for example.

There is one further matter to be noted: The location of an industrial plant or facility not infrequently involves a judgment as to probable administrative interpretations and decisions of a state governmental agency. In that connection, consultation with key personnel administering state taxes on corporations has been noted. The state's industrial development agency is the industrial prospect's logical entree for such contacts and consultations. The same would be true with respect to problems in other areas mentioned above in connection with informational needs—the agencies administering state incorporation procedures, sanitary and waste disposal regulations, industrial safety laws, workmen's compensation, unemployment compensation, new highway alignments in relation to industrial sites, etc.

There is still another area in the plant or facility location process with respect to which the state industrial development agency has a value for the industrial prospect. Such state agencies, willy-nilly, are regarded by local industrial development organizations as tax supported, state governmental units from which assistance is expected. Communities look to the state agencies—as they do to utilities and railroads—for general assistance and for "prospects." Accordingly, state industrial development agencies, in addition to the community characteristics data aspect of their services, treated above, will almost invariably also be found a knowledgeable point of contact and intercommunication between the prospect and the local area for local plant location data, inspection tours and actual negotiations. The prospect will of course find these same plant location aids in his relations with the utility or railroad serving the area.

Such, then, are the central values of state industrial development agencies, viewed from the standpoint of services of management on plant and facility location matters.



William R. Davlin is secretary of the Pennsylvania Department of Commerce and a man with wide experience in the industrial development field. He is frequently called upon to make major addresses on development factors, the report here having been adapted from a talk made to an AMA seminar.



PERSONNEL FACTORS IN PLANT RELOCATION

Does your new plant program involve the relocation of personnel? If so, there are a number of problems to be solved in order to make the move efficient, and fair to those involved. Here is a comprehensive report on how this may be done . . .

By Robert D. Courtright

THE relocation of plant personnel is usually a new field for most companies to tackle. For that reason it requires considerable soul-searching and debate on management's part before a fair policy can be developed for handling it.

Many companies confronted with the task of moving a sizable group of personnel have previously dealt only with transfers of individuals, such as management people promoted to a better position at another plant or salesmen transferred from one sales office or district to another.

They also may have acquired experience in bringing in new employees from other cities at company expense. In contrast to those individual moves, mass relocation is more difficult for a company to undertake because the exposure to unsatisfactory employee relations is greater if it is not handled correctly.

Once the decision has been made to move operations from one area to another, management is faced with several immediate points about the treatment of employees:

1. *Notification of Employees.* It should be recognized that a company request to uproot one's family will cause a certain amount of shock. The blow can be softened somewhat, however, by plenty of advance notice, giving the individual time to adjust to the idea and to formulate his personal plans. Bulletin

board announcements or employee meetings have been used to good advantage for that purpose.

The first announcement should give the reasons for the move. The first reasons will vary from company to company, such as decentralization, or its converse, consolidation, expanded production requirements, more modern facilities, etc. Nevertheless, whatever the reasons may be, they should be expressed optimistically in terms of continued company prosperity.

Since it is important to inform employees early, details about the move are usually not available at the time of the first announcement. A general timetable for the move and a statement that more information is being developed will handle that situation temporarily. Both points indicate to employees that the company has their best interests in mind and will make an effort to treat them fairly.

2. *Who Should Be Asked To Move?* Management, technical and professional personnel would probably be the most difficult to replace. For that reason they are invariably included in the invitation. In the category of clerical and production workers, usually only key personnel are invited. Extenuating circumstances might cause a company to invite everyone, however.

For instance, it might conceivably be less expensive to move people than to

pay severance pay. Also, if the employment situation is bad in the old location, a small company which has in the past been very close to its people might invite them to move to help them avoid unemployment. The maintenance of employee morale, and production, up to and including the move certainly is of prime importance to the company.

How does a company encourage key personnel to make a move? A promotion or pay increase will greatly assist. Beyond that, the company must indicate that home life will not be adversely affected. Standards of living must be maintained or improved. People want to feel that the same activities they now enjoy will be available, with only the geography or friends changed. The general answer is a plan for relieving the individual of any financial responsibilities directly connected with the move and to keep him informed of company plans.

3. *Responsibility For Handling The Move.* Committee action can be useful to establish general policies, dates and similar items; however, it usually cannot deal with the myriad of details which will be confronted. To handle them, the company will in most cases turn to the Personnel or Industrial Relations Department. An operations manager might be given the assignment, although any diversion from production during the move is apt to be

hazardous.

Department supervisors are usually given the responsibility for handling individual transfers of employees in their unit.

4. *Financial Allowance For Employees.* There are a number of ways in which the company can assist its people in this category. The tendency appears to be one of footing the bill not only for movement of household goods, but also for a multitude of miscellaneous expenses incidental to the move. Some companies also assist employees in both ridding themselves of the present home and in the purchase of a new one. What are some of the costs which a company should plan to pay?

(a) *Cost of a Trip to the New Community.* Most companies permit at least one trip to the new location for the employee and his wife. A more liberal minority have set no limit, specifying only that they be confined to a "reasonable amount." Expenses covered include transportation, hotels and meals and incidental expenses, such as babysitters, telephone calls and car rental. Partial time off is usually allotted for the trip.

(b) *Temporary Living Allowance.* In many instances, the employee may precede his family to the new location when his job is actually transferred. Under those circumstances, most companies provide a temporary living allowance for food, lodging, laundry, local transportation, etc. Also included are a specified number of return visits to see his family before they arrive. If the move is a short distance, the company usually pays employees' commuting expenses from their homes for a nominal period.

(c) *Moving Expenses.* When moving day arrives for the employee, practically all companies pick up the check for packing, transporting and unpacking of his possessions. Some companies even put out a little booklet on how to prepare for the event. In addition to furniture moving, there are apt to be a number of other items which must be covered, such as shipment of pets, shipment of automobiles, installation of new carpeting and draperies, and installation of plumbing and electrical wiring for appliances in the new home, including erection of television aerials, tuning of television sets and pianos following the move, and a cleaning service at both the old and new homes. Automobile registration in a new state is commonly paid for. Expenses of transportation of

the employees' dependents to the new area are also considered generally to be a cost incurred by the employer. If there is a short delay in a family's getting into its home in the new community, the company should plan on paying for temporary lodging for a few days.

If the delay is to be fairly lengthy payment for storage of furniture up to as long as six months may be necessary. The mode of transportation to the new community and the selection of the moving company are generally up to the employee.

It should be noted that the majority of companies do require vouchers or affidavits for household moving expenses and the other costs which they decide they will cover for the move, such as hotel bills, Pullman and airline tickets and the others already mentioned.

(d) *Incidental Expenses.* There is an interesting point to consider about the payment of a flat fee for so-called incidental expenses. Several companies have received a ruling from the Internal Revenue Service that any amount allotted by the company which exceeds the money actually spent by the employee is taxable as far as the employee is concerned.

Any portion of the incidental allowance considered to be a bonus or compensation for inconvenience has also been designated as taxable. To avoid exposing employees to embarrassing investigation, many companies pay a certain specified amount for incidentals, withhold the normal tax on that amount and explain the reasons for withholding it. Few, if any, companies have had any hurt employees' feelings from that procedure.

(e) *Housing Assistance.* One of the more thought-provoking subjects for management to face is the matter of financial assistance in selling and buying houses. Most companies furnish guidance in locating new residences during mass moves. Let's look at how a company can help its people find new homes without backing them financially.

One method is to establish a real estate information and assistance center in the new community under the supervision of a local real estate broker retained especially for that purpose on a fixed fee.

Another more common procedure is to appoint a housing coordinator within the company who will determine available housing within a normal com-

muting distance from the new plant, survey employee requirements in the way of number of rooms, price ranges, rental or purchase, and location and attempt to correlate the two lists.

Both these methods serve as a clearing house for housing needs and availability and can serve the useful purpose of putting the matter of finding housing on a personal basis between company and employee.

Another function of the coordinator might be to work with bankers, city officials, the Chamber of Commerce, merchants, real estate brokers and building contractors to establish and project housing, zoning, utilities, road and school needs for the area to meet the influx of new citizens.

How far should a company go in financially helping an employee to dispose of his old home and to buy a new one? Many companies have made it a policy to assume losses on rental leases which could not be cancelled without loss. They have also assisted to some degree financially by paying for advertisements of property for sale and by payment of real estate and legal fees.

A minority have provided against financial losses on the part of employees when they sold their homes. The usual procedure in that case is for the company to pay for an appraisal of the property by a qualified third party. The employee is then allowed a set period to attempt to sell at higher than the appraised value.

If he is unable, the house goes on the market at the appraisal figure, which the company guarantees to him. In other words, the company takes the loss if he is forced to sell at lower price. Under a plan of that type, the company also commonly goes all out and pays broker and legal fees.

The company might also buy the property outright, thus relieving the employee of all responsibility of disposing of it. If an employee moves to a new house before the old one is sold, many companies have made it a practice to pay mortgage interest, taxes and heat and utilities on the old house for a specified time or until it is sold.

It is well to remember that a change in location may very likely not benefit the individual financially, which increases his natural resentment to change in his normal living habits. It is therefore important that there be no delay in providing him with the facts about how his company is to assist him

PERSONNEL FACTORS

in the move. Otherwise, his viewpoint can become distorted by a lack of knowledge and his thoughts will become prejudiced against the move.

Employee Questions

We have considered the company's viewpoint about the move. Let's turn now to other points the employees will want to learn:

1. *Description of the New Community.* Eventually the employee will want to visit the place himself and will also expect his wife to look it over before he decides for or against the move. Prior to an actual visit the community can be presented to the employees in printed form. Pamphlets, company newspapers, movies and slides are typical media for accomplishing that end.

People want to know everything available that compares their present community and home-life with those of the new one. Points which affect their pocketbook and their families are probably most important to them:

(a) *Taxes.* An outline of excise; gift; personal income; personal property; poll, real property; sales; and usage taxes should be presented.

(b) *Statistical Information.* Population; weather; comparative food prices; general cost of living; the number of houses under construction; and available property for rent should be outlined. The steps involved in buying property might be outlined here also. Factors of automobile registration, operators' licenses, liability insurance and speed laws are also significant. What are the public utility rates for electricity, gas and water?

(c) *General Information.* Are there adequate public and parochial schools? Are colleges, private schools and business, art and music schools available? Churches need to be described, too. Other community facilities should be pointed out, such as shopping centers, banks, hospitals and doctors, transportation, both inter-city and local, newspapers, radio and television stations and parks, playgrounds and campsites.

2. *Job Status.* It may be that the company intends to stay in business in the old location, while using the new plant for expanding production. In that case, jobs in the remaining operations might be available for those not moving to the new community. That condition, of course, is the optimum

EXPANSION


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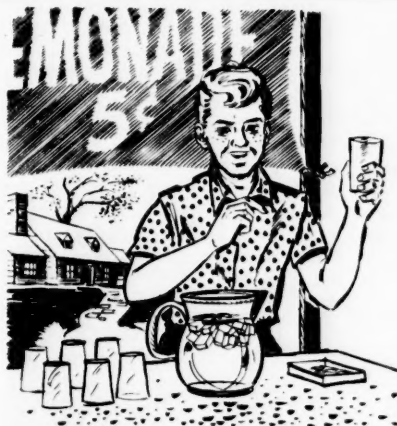
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one; fortunately, it is also quite common in large corporations.

If the company happens to be leaving the old community completely, severance pay and assistance in securing new employment become of paramount importance. In some companies the normal company separation pay plan has been applied.

In others a special one has been developed. When extra consideration is given to separated employees, it is usually designed to prevent or ease hardships on their part or as an incentive to maintain production to the end. Most plans for that purpose are variations of a basic one involving one week's pay per year of service.

Other additional benefits may provide for early retirement for employees over sixty years of age or with at least thirty years' experience. If separated employees have invested in a pension fund, they are invariably reimbursed the amount they have invested.

Two Types of Workers

There are basically two types of people to deal with among employees who are not transferred: the people who are anxious to advance further in the company at a fairly respectable pace; and those who are satisfied to reach a certain level in the company where security and a certain peace of mind can be expected.

When a task force is selected from an older plant, promotions are available in two locations: the new plant itself where new jobs are created; and the old plant where vacancies are caused by transfers. Hence the first category of people is generally taken care of; the second category needs no assistance.

Preparation for a new plant

The question of how to prepare a community for the arrival of a new company is an interesting one. On one hand the company must continue to show evidence of its good faith surrounding the decision to locate there, while refraining from sounding too demanding in its needs from the area. The community at the same time is obligated to produce the advantages it promoted in its campaign to attract new industry.

A typical company program usually consists of community relations and engineering negotiations. Community relations involve contacts with local government officials and groups, the press and radio stations, the Chamber of Commerce and local civic clubs such as Kiwanis, Lions and Rotary. The purpose is to keep the local citizenry posted concerning company plans for the community and to acquaint them with its history, products and general business philosophies.

The company will also do well to have available a schedule for construction and personnel build-up which will enable the various groups in the community to pinpoint what and when they must provide for the company. Usually a staff assistant is appointed to establish this type of relationship.

What type of engineering negotiations are required? One involves protective zoning for the company, which will prevent cheap housing, junk yards, sandwich stands or objectionable industry from chopping up in its neighborhood. This sort of action is best handled through the city manager or planning coordinator for later approval by proper legislative action.

Another step is the arrangement for adequate municipal services such as water supply, sewage disposal, roads to the plant site and police and fire protection. Utility companies must be contacted for furnishing of electrical, gas, and telephone service. This phase of the operation can be done by the plant engineer at the local level; however, most large companies handle it centrally as part of general construction activities.

How a community organizes for its undertaking usually depends upon the magnitude of the plant and its effect upon the community. It must expect to expend additional funds for extension of water and sewer lines and roads and streets to the plant site.

Religious, fraternal and youth organizations also can play an important part in assisting the new company to adjust to the area by providing welcoming committees. They can also seek participation by the incoming personnel as church members, Boy Scout committeemen and troop leaders and as club members. Barriers are thus broken down in a non-business atmosphere, making easier both company and general community efforts to settle the plant and get it into profitable operation.

TABLE I

Summary of Moving Allowances Generally Paid By Employers.

1. Transportation costs for house-hunting trips.
2. Temporary living allowances, including return visits.
3. Family transportation to and temporary living expense at the new location.
4. Movement of household goods.
5. Some companies also furnish financial assistance in selling and buying homes and payment of a flat fee to cover unitemized expenses.

TABLE II

Points to Remember During Relocation of Plant Personnel.

1. Give the employees plenty of advance notice.
2. Provide complete information about the new community.
3. Assist them in every way possible to make the move after they have been asked.

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ABOUT THE AUTHOR

With wide experience in the planning field, Richard D. Courtright has been associated with International Business Machines Corporation since 1942 in various engineering, manufacturing and staff capacities. He is manager of the company's Facilities Planning Department and since 1954 has been engaged in planning for new manufacturing and administrative facilities. A registered professional engineer, Mr. Courtright is a graduate of the Cornell University College of Engineering. His report here is based upon research done in connection with AMA seminars and a talk before the American Industrial Development Council.



RECEIPTS

By Suzanne Johnson

GENERAL REPORTS—

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Foundation Design and Practice by J. H. Thornley. This is the first book on foundations to emphasize economy in de-

signing and building. Its purpose is to help the designing engineer to choose the correct foundation for a given structure at the least possible cost to the owner—without in any way reducing the safety of the structure.

In this day of rising costs and intense competition in the building industry, it is increasingly important for engineers to design and install foundations which meet both the engineering and economic requirements. Therefore, this book will be indispensable to engineers working toward that goal. Columbia University Press, 2960 Broadway, New York 27, New York. 298 pages, \$15.00.

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Statement of the ownership, management, etc., required by the acts of Congress of August 24, 1912, and March 3, 1933, and July 2, 1946, of INDUSTRIAL DEVELOPMENT AND MANUFACTURERS RECORD, published monthly at Baltimore, Maryland, for October, 1959.

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H. M. Conway, Jr., President

Sworn to and subscribed before me this 4th day of September, 1959.

Stancel L. May, Jr.
(My commission expires April 23, 1963)

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EDITORIAL SURVEYS . . .

and plant location reports

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Columbus, Ohio	June, 1959
St. Louis Area	May, 1959
Iowa	Apr., 1959
Puerto Rico	Mar., 1959
Washington, D. C. Area	Feb., 1959
Cleveland Corridor	Jan., 1959
West Texas	Jan., 1959
Rome and Floyd County, Ga.	Dec., 1958
Sacramento	Nov., 1958
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Industrial Districts

The following planned industrial districts have sites available for immediate construction. Advantages offered by such districts are described in detail in the November-December 1954 issue, pages 6, 7, and 8.

Services offered are indicated by the following code: (A) Architect & Engineer; (C) Construction; (E) Electric Power; (G) Natural Gas; (F) Financing; (P) Paved Streets; (R) Rail Siding; (S) Sewers; (T) Telephone; (W) Water.

Iowa

IOWA "MANUFACTURING MEADOWS"—Clinton, Iowa (population 35,000), 138 miles west of Chicago on Mississippi River and Lincoln Highway (U. S. 30), 190 acres within city. Master plan by Skidmore, Owings & Merrill. Served by Chicago and North Western Railroad. Developed by Clinton Development Company, a civic-non-profit corporation. Chapel 2-4536. R. J. Stapleton, Managing Director. Services available: (a) (optional), (c), (e), (g), (f) (optional), (p), (r), (t), (w), restrictions.

Missouri

PAGE INDUSTRIAL CENTER—St. Louis—planned industrial park, developers—Page Industrial Center, Inc., 7811 Carondelet, St. Louis 5, Mo., Edward L. Bakewell, Realtor, Central 1-5555, on Rock Island lines, 60 acres with all services available on property. Restrictions.

Illinois

ILLINOIS INDUSTRIAL VALLEY: Cities of La Salle, Peru, Oglesby, Spring Valley, Ladd, DeFue offer planned industrial sites. Excellent transportation via the Illinois River, 7 major railroads, numerous carriers, 2 U.S. Highways. Skilled workers. Power in abundance. Active ID organization to serve you. Robert Blomgren, Director, Box 446, La Salle, Illinois. Phone: CA 3-0227. Services: (a) optional, (c), (e), (f) optional, (g), (p), (r), (s), (t), (w).

IMPORTANT—when replying to classified advertisements with no address given, write ID Box, Conway Publications, Inc., North Atlanta 19, Ga.

Georgia

METROPOLITAN ATLANTA—Five Industrial Districts offering planned sites of varying location, size, price. Services available: (A) optional, (C), (E), (G), (F) optional, (P), (R), (S), (T), (W). In your Southeastern plant or warehouse survey contact: F. Wm. Broome, Industrial Manager, DeKalb County C of C, 250 E. Ponce de Leon Ave., Decatur, Ga. (Atlanta phone, DRake 8-3691).

Available Sites

SUBURBAN ATLANTA—Sites of 3, 5, 10, 25, 50, 100 or more acres. All utilities and rail service in DeKalb County—Georgia's newest industrial area, 70% urban with more than 200 industries in industrial districts and individual tracts. For your new Southeastern plant or warehouse location—inquire and visit through F. Wm. Broome, Industrial Manager, DeKalb County C of C, 250 E. Ponce de Leon Ave., Decatur, Ga. (Atlanta phone, DRake 8-3691).

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Middlesex County, N. J. 20 Miles from New York—50 Miles from Philadelphia. On U. S. No. 1, N. J. Turnpike and Mainline P.R.R. Write for Booklet.

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Childress, Texas—24,000 sq. ft.—completely sprinkled—1 story, all brick—concrete floor—R.R. siding and truck loading platform—13 ft. ceiling—very favorable labor market—low rental. Write Childress Chamber of Commerce.

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Does your company want to enhance its prestige in the business world? Do your executives deserve wider recognition? Would you like to present a more impressive picture of your company's history and growth? Do you need an easily-readable current description of the facilities and services you offer? Would you like to have such a presentation prepared by an outside group with objective viewpoint and wide experience in business reporting? Interested? Then contact the publishers of **INDUSTRIAL DEVELOPMENT** and **MANUFACTURERS RECORD** to discover how our professional staff can serve you.

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CONWAY PUBLICATIONS, INC.
295 Madison Avenue, New York
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109 Market Place, Baltimore
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CLASSIFIED RATES: \$4 per line for 1-time insertion, \$3 per line for 12-time insertion. Estimate about 40 spaces in each line, allowing for box number.

PROFESSIONAL CARD & SIR RATES: \$30 per column inch for 1-time insertion, \$23 per column inch for 12-time insertion.

BOX NUMBERS: Publisher will assign box and relay correspondence on a confidential basis if desired.

PROOFS: Not furnished on classified ads.

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Economic data on request

Plant location services

Area Development Department

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Stewart G. Neel, Manager



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A NATIONWIDE SERVICE

THIS SPACE
NOW AVAILABLE
FOR
PROFESSIONAL CARD

Professional Developers Directory

INDEX TO PROFESSIONAL AFFILIATIONS

AIDC American Industrial Devel. Council
AIP American Institute of Planners
AMA American Management Association
ARDA American Railway Devel. Assn.
ASPCA ... Assn. of St. Plan. & Devel. Officials

ASPO Amer. Society of Planning Officials
EEI ... Edison Elec. Inst., (Area Dev. Comm.)
GLSIDC Gt. Lakes Sts. Ind. Devel. Council
NIDA Northeastern Industrial Devel. Assn.
NIZC Natl. Industrial Zoning Committee

PNWIDC Pacific N.W. Ind. Devel. Council
SIDC Southern Industrial Devel. Council
SIR Society of Industrial Realtors
ULI Urban Land Institute

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Alabama Power Company, Mr. C. H. Killan, Advertising Manager, 600 North 18th Street, Birmingham, Ala. (Ad page 15)

Baltimore Gas and Electric Company, Mr. Robert J. George, Industrial Development Engineer, 1102 Lexington Building, Baltimore, Md. (Ad page 5)

Greater Burlington Industrial Corporation, Mr. Charles D. Townsend, Executive Director, 191 College Street, Burlington, Vt. (Ad page 3)

Carolina Power and Light Company, Mr. D. E. Stewart, Manager-Area Development Department, Insurance Building, Raleigh, N. C. (Ad page 63)

Chesapeake and Ohio Railway, Mr. Wayne C. Fletcher, Director of Industrial Development, 1103 C & O Building, Huntington, W. Va. (Ad 3rd cover)

Chicago, Rock Island and Pacific Railroad, Mr. P. J. Schmidt, Manager of Industrial Development, LaSalle Street Station, Chicago, Ill. (Ad page 11)

Georgia Power Company, Mr. Gene A. Yates, Vice President, P. O. Box 1719, Atlanta, Ga. (Ad page 40)

Grand Central Industrial Centre, Mr. W. M. Clough, Vice President, P. O. Box 3157, Grand Central Station, Glendale 1, Calif. (Ad page 9)

Lewis Terminals, Mr. Phillip D. Lewis, Vice President, 31 West 20th Street, Riviera Beach, Fla. (Ad page 3)

Manatee County Committee of 100, Mr. Harry Lee, Executive Director, Box 360, Bradenton, Fla. (Ad page 5)

Michigan Consolidated Gas Company, Mr. R. L. Gage, Manager-Industrial Development Division, 415 Clifford Street, Detroit, Mich. (Ad page 14)

New York Central System, Mr. W. J. Marshall, Industrial Department, 466 Lexington Avenue, New York, New York. (Ads 2nd cover and page 1)

Niagara Mohawk Power Company, Mr. Richard F. Torrey, Director-Area Development, 300 Erie Boulevard, Syracuse, New York. (Ad page 59)

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Puget Sound Power and Light Company, Mr. Stewart G. Neel, Manager—Area Development, 860 Stuart Building, Seattle 1, Wash. (Ad page 66)

Southern Railway System, Mr. B. E. Young, Assistant to President, 15 and K Streets, N. W., Washington 13, D. C. (Ad 4th cover)

Southwestern Electric Service Company, Mr. E. W. LeNeveu, Mercantile Bank Building, Dallas, Tex. (Ad page 37)

Texas Power and Light Company, Mr. J. D. Eppright, Director of Industrial Development, P. O. Box 6331, Dallas, Tex. (Ad page 2)

Union Electric Company, Mr. M. E. Skinner, Vice President and Director of Sales, 315 North Twelfth Boulevard, St. Louis, Mo. (Ad page 16)

Union Pacific Railroad, Mr. A. C. Ritter, G. M. of Props., 1415 Dodge Street, Omaha, Nebr. (Ad page 4)

Windsor Properties, Inc., Mr. W. C. Windsor, Jr., President, 2828 Southland Center, Dallas 1, Tex. (Ad page 63)

PLANT CONSTRUCTION AND INDUSTRIAL SERVICES:

American Creosote Works, Inc., Mr. S. B. Braseiman, Jr., Vice President, 1305 Dublin Street, New Orleans, La. (Ad page 37)

The Kinnear Manufacturing Company, Mr. Wallace Pearson, Vice President, 1191 Fields Avenue, Columbus 15, Ohio. (Ad page 38)

OTHER SERVICES:

Executive Gift Service, Mr. Guy H. Tucker, 2592 Apple Valley Road, North Atlanta 19, Ga. (Ad page 13)

ID SECRET SITE SERVICE

There may be sound reasons why you should wish to obtain preliminary information on possible sites without revealing your interest or identity. Recognizing this, INDUSTRIAL DEVELOPMENT offers a Secret Site Service to readers who hold positions of responsibility with manufacturers or other business firms having a legitimate interest in sites. Complete information, including site specification forms, will be sent promptly and confidentially at your request. Address SECRET SITE SERVICE, Conway Publications, Inc., North Atlanta 19, Georgia.



The Colonel Says

The staff man is much misunderstood, according to a wit at Wheeling Steel Corp. Everybody seems to see his actions in a wrong light, somehow.

Here's how they interpret him:

If he is usually in the office, he should get out more often.

If he is out when you call, he isn't on the job.

If he talks on a subject, he's trying to run things.

If he is silent, he has lost interest or he has an inferiority complex.

If he agrees with you, he lacks originality or conviction.

If he doesn't agree with you, he is ignorant.

If he can't give you an immediate answer, he is incompetent.

If he can give you an immediate answer, he doesn't think things through.

If he appears cordial, he is playing politics.

If he appears aloof, he should be trimmed down to size.

If he has a strong opinion, he is bull headed.

If he tries to see both sides of a question, he is pussyfooting.

If he is well dressed, he thinks he is a big shot.

If he isn't well dressed, he is not a proper representative.

Heaven Forbid!

A long-time member of a large Madison Avenue advertising agency, reported a new high in conference goings-on recently.

It seems they had just taken on the son of a wealthy friend of the boss to teach him the business.

At his first executive meeting, the proper time spot for a new summer television show came under discussion.

"I would suggest", said one ad man, "three o'clock on Sundays seems a good spot for it."

"Three o'clock Sundays!" cried the budding executive. "That's impossible—everyone is out playing polo!"

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One man had a secretary who was habitually late, by fifteen minutes, every day.

One day she slid snugly into her place only five minutes tardy.

"Well," said her boss approvingly, "I want to congratulate you. This is the earliest you've ever been late."

At Circleville IN SOUTH CENTRAL OHIO

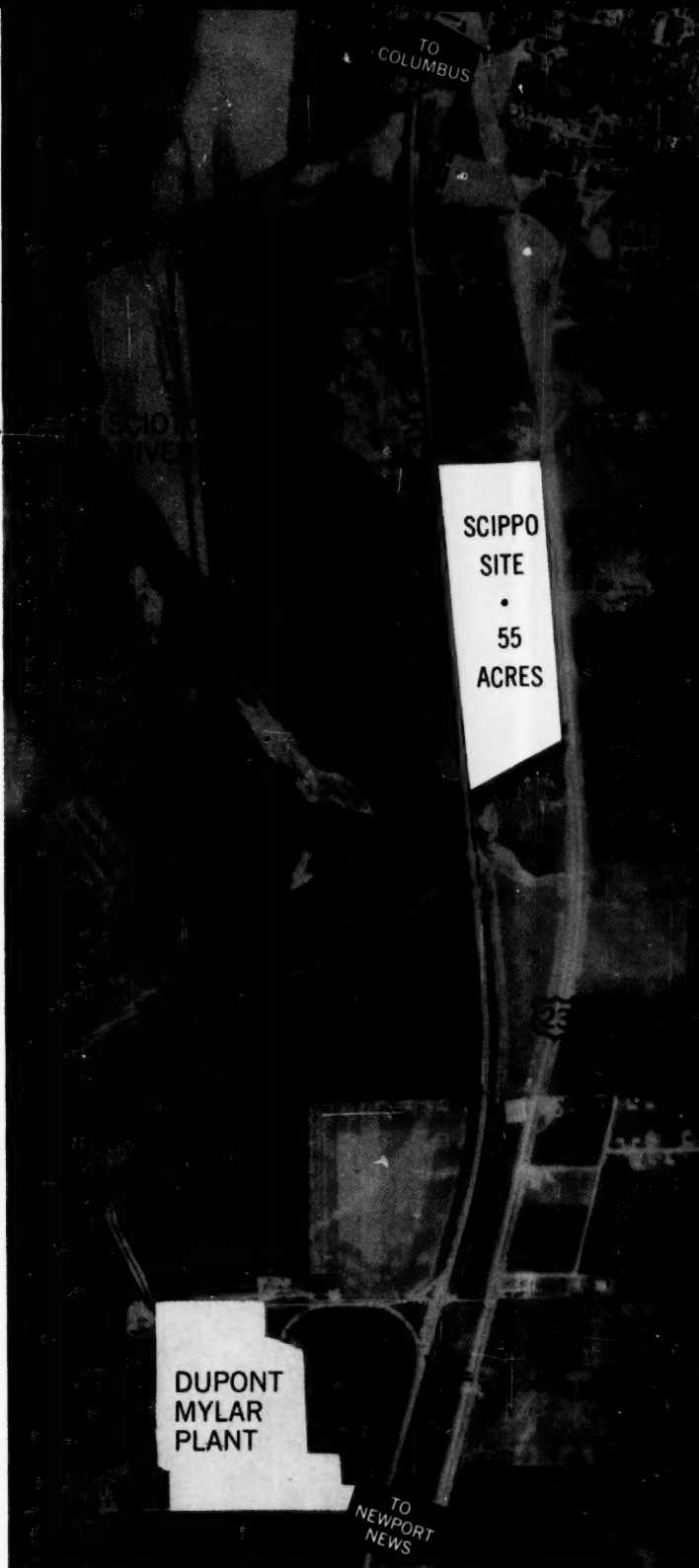
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- Fuel sources — high-grade bituminous coal, as well as high quality coke, is available in abundant supply from nearby fields in eastern Kentucky and West Virginia.
- Water in abundant supply for industrial use, including two 18-inch wells formerly used by C&O and capable of a million-gallon daily yield. Access to Scioto River for effluent disposal.
- Labor — hundreds of skilled people experienced in the production of automotive hardware, plastics, transportation equipment, glass, leather goods, textiles, apparel, and processed foods. Located within easy travel range.

Consult C&O in confidence: Complete industrial surveys of this and many other sites are available to interested companies. Inquiries are handled in complete confidence and without obligation. Address: Wayne C. Fletcher, Director of Industrial Development, Chesapeake and Ohio Railway, Huntington, W. Va., Telephone: Jackson 3-8573.



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This man is a *specialist* in plant location matters. He knows the problems involved and he'll give you straight answers to your questions about the quality and availability of labor, community attitude, tax rate and other vital factors that go to make up the "industrial climate" of an area. He knows

where and how to get other information of special interest to you, while keeping you out of the picture completely, if that's the way you want it.

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Harry A. W. Smith
President

The Southern Serves the South



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